



# How to Instal and Operate

**“HIS MASTER’S VOICE”**

**RADIOGRAM**

**MODEL LI-4U and**

**STEREOPHONIC RADIOGRAM**

**MODEL LI-4U**

***with Extension Speaker ES2 and***

***Stereo Pickup PHI***



Now that you are the fortunate owner of an “H.M.V” Receiver, you are assured of musical entertainment at its best. Careful attention to correct installation will ensure that the excellence of your new “H.M.V” is brought out to full advantage.



***This Booklet must be delivered  
with the Instrument to the User***

PART No. 682-7231

It is strongly recommended that the installation of this receiver be carried out by a competent radio technician, who knows the conditions under which the instrument operates best.

This model is a 7-valve A.C. mains-operated superheterodyne radio receiver covering the medium-wave broadcasting band 540 to 1600 Kc/s, and has two separate audio amplifier channels suitable for reproduction of stereophonic records. It may be supplied in one of two forms:

- (a) As a radiogram fitted for playing standard and long-playing records and capable of being converted for stereophonic record playing by the addition of an extension speaker unit and a plug in pickup head.
- (b) Complete with the extension speaker and additional plug-in pickup head ready for playing stereophonic records as well as single-channel standard and long-playing records.

#### VALVE COMPLEMENT

1 Type 6AN7  
1 Type 6N8  
2 Type 12AX7  
2 Type 6BQ5  
1 Type 6CA4

#### LOUDSPEAKERS

Two speakers are provided in the radiogram, a 12-inch low-frequency unit with a 5-inch high-frequency unit. They are mounted in an acoustic enclosure which is exactly matched by extension speaker unit, Type ES2, containing an identical pair of speakers.

### INSTALLATION

This radiogram is designed to operate from alternating current supply mains of any voltage between 200 and 250 volts at a frequency of 50 cycles per second. It is normally supplied connected for operation on 226-250 volts. If it is desired to operate on lower voltages than this, it will be necessary to alter the mains tapping adjustment of the receiver. This operation should be carried out by the retailer who supplied the instrument.

If you are not sure of the voltage of your supply mains, please inquire from the electricity supply authorities before attempting to connect the receiver.

When connecting the receiver to a power outlet it is advisable to try reversing the active and neutral connections of the plug while listening to the radiogram with Function Selector set to "Mono" and with the volume control advanced to maximum clockwise rotation. A faint, low-pitched hum may be heard with one connection, which should be reduced when the power connections are reversed. The cord should then be permanently connected in the manner which produced the least hum. This will give the quietest operation.

### REMOVAL OF TRANSIT SCREWS

Before attempting to use the automatic record changer, remove the two screws coloured red which secure the mechanism to the cabinet. After removal of these two screws the record changer should float freely on its spring suspension. Also slide away the clip which secures the pickup arm to its rest and make sure that the clip is well out of the way of the pickup movement.

### AERIAL AND EARTH

Two terminals are provided at the back of the cabinet marked 'A' and 'E'. The aerial should be connected to terminal 'A' and the earth to terminal 'E'. In most localities the 20 feet of insulated flexible wire provided will be found adequate as an aerial. The aerial wire should be conducted either along the floor or skirting board or, preferably, raised to the height of the picture rail. In country localities, or if reception of distant stations is desired, the installation of an outside aerial will be found beneficial. For metropolitan locations or in country locations within five miles of a powerful local station, the total length of aerial wire should be from 25 to 50 feet, including the lead-in; it should be installed in as near a vertical position as possible. At greater distances from local stations a longer aerial could be beneficially used up to a maximum length of perhaps 150 feet. For outdoor installation, the aerial should be insulated with two good insulators at each end and should be installed as far as possible at right angles to any likely source of interference, such as overhead tram wires or electric power supply lines. A suitable lightning switch and arrester should be fitted and the lead-in should be taken into the building through a proper lead-in tube and not jammed in the window frame. The receiver should be earthed by means of a heavy-gauge earth wire of the shortest possible length, connected to the terminal marked 'E'; the use of such an earth will result in quieter and better reception in the majority of cases. The earth connection should always be made either to a buried earth plate or rod, or else to a water pipe which enters the ground within a short distance from the connection. Neither a gas pipe nor the lead covering on a telephone cable should ever be used for earthing purposes.

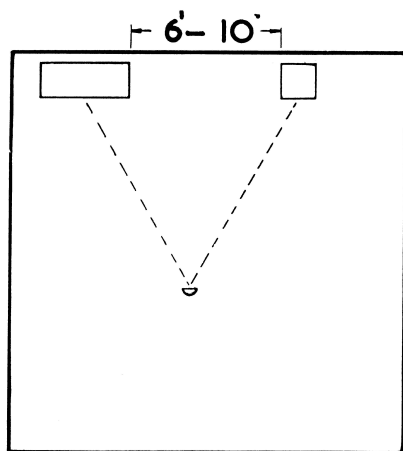
It is important to note that, when using this receiver with an outside aerial, be sure that the outside aerial is not connected to the free end of the hanked aerial wire provided with the instrument. It is better to disconnect the hanked aerial from the aerial terminal on the back of the receiver and substitute the lead-in from the outside aerial system.

## PLACEMENT OF CABINETS

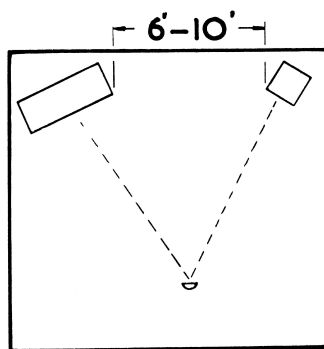
### *(Complete Stereophonic Equipment)*

The radiogram cabinet and the extension speaker cabinet should be placed at one end of the room and from six to ten feet apart. They may face directly down the room or may face inwards slightly towards the listeners. Since the loudspeakers in the radiogram cabinet are towards the left-hand side of this cabinet, the greatest spacing will be achieved by placing the radiogram on the left side of the room (looking towards the units). However, it is not essential that this arrangement is followed. In many cases other consideration in the room will dictate the placement of cabinets, and any placement will be satisfactory which allows reasonable separation between units. The maximum stereophonic effect will be obtained when listening at a position roughly equidistant from both cabinets. However, this is not critical and a spatial effect will be obtained anywhere in the room.

Two suggested arrangements are shown below:



**LARGE ROOM.**



**SMALL ROOM.**



## LOUDSPEAKER CONNECTIONS

### *(Complete Stereophonic Equipment)*

At the rear of the radiogram, three loudspeaker connection sockets are provided. As normally supplied, for use as a single-channel instrument, the internal loudspeaker is plugged into the centre socket labelled "Single Channel." With this connection the total power of the two amplifiers is fed into the one loudspeaker. To convert the instrument for use as a stereophonic gramophone, this plug should be withdrawn from the centre socket and reinserted in the "Left" socket, if the radiogram is on the listener's left side when facing the equipment, or in the "Right" socket if the radiogram is on the right.

The extension speaker unit should then be plugged into the remaining "Right" or "Left" socket as appropriate.

Once this conversion has been carried out it may be left permanently connected. It is not necessary to alter speaker connections to change from playing stereophonic records to ordinary records or radio reproduction.

## OPERATION

### CONTROLS

The receiver has six controls; their functions are marked on the lower edge of the dial glass. These are, from left to right:

Balance.

Treble.

Bass.

Volume.

Function Selector.

Tuning.

Their operation is as follows:

*Balance.* This control is only effective when the Function Selector is in the "Stereo" position, i.e., when playing stereophonic records. Its purpose is to balance the outputs of the two amplifier channels used for stereophonic reproduction so that sounds which should emanate from the centre of the stage appear to come from mid-way between the two loudspeakers. A useful method for initial adjustment of this control is to set the equipment for playing stereophonic records, i.e., with Function Selector set to "Stereo"

and with the stereophonic pickup head plugged in. Then use an ordinary LP record (not a stereophonic one), start the record player and then adjust the Balance Control until the sound appears to come from mid-way between the two cabinets. It is necessary to step back into the correct listening position, at equal distance from both speakers, in order to observe the effect.

Having set the Balance control in this manner, it is not necessary to adjust it any further during the playing of stereophonic records.

*Treble.* This reproducer has individual controls for adjustment of treble and bass tones allowing considerable flexibility in their use. The treble tone control has facility for increasing or decreasing the prominence of high frequency sounds. To increase the treble, rotate the control clockwise. To reduce the treble, rotate the control anti-clockwise.

*Bass.* This tone control affects the low frequency notes in a similar manner. To increase the bass, rotate the control clockwise. To reduce the bass, rotate the control anti-clockwise.

*Volume.* To increase volume, rotate this control clockwise.

*Function Selector.* This is a four-position switch. In the extreme anti-clockwise position of this switch, the set is OFF. Rotating clockwise to the next position switches the equipment ON and selects "Radio" operation. The next position is "Mono" for playing all records other than stereophonic records. The last position, "Stereo," is for playing stereophonic records only.

*Tuning.* This control selects the desired broadcasting station as indicated on the dial scale by the travelling pointer. Rotate the knob until the desired station is indicated by the pointer, then tune the instrument until the station is heard clearly. As the tuning control is moved across the position of the station, it will be found that the station is heard through a narrow band, on either side of which the station sounds distorted and high-pitched. The control should be set mid-way between these two positions.

## TO PLAY RADIO

Switch set on at mains power outlet.

Set Function Selector to "Radio."

Advance Volume control to approximately half rotation of the knob.

Similarly set Treble and Bass controls to the centre of their rotation.

Tune-in the desired station with the Tuning control.

Adjust Volume to the desired listening level and adjust tone controls to desired tonal balance.

## TO PLAY RECORDS

*(Radiogram Without Stereo Attachments)*

*Caution.* In no circumstance should stereophonic records be played without the necessary additions available for that purpose.

Switch Function Selector to "Mono."

Advance Volume control to the centre of its rotation.

Similarly set Treble and Bass controls to the centre of their rotation.

Operate the record changer as detailed below under "Automatic Record Changer."

When the pickup starts to play the record, set Volume to the desired listening level, and the tone controls to the desired tonal balance.

## TO PLAY RECORDS *(Complete Stereophonic Equipment)*

Although normal microgroove or stereophonic records may be played by use of the Stereo Pickup and with the Function Selector in the "Stereo" position, it is recommended that the Stereo Pickup head be reserved solely for the reproduction of stereophonic records except when balancing the equipment as detailed above. Never play standard 78 r.p.m. records with the Stereo Pickup or stereophonic records with the standard turnover cartridge pickup. Stereophonic records may be damaged if played by a pickup not specially designed for that purpose. Although the latter is the only improper usage likely to cause damage to records or reproducing equipment, the following procedure will yield the most enjoyment and service from the instrument:

Except when playing stereophonic records proceed as detailed for the Radiogram without Stereo attachments. Approximately equal sound will come from each speaker system, producing a pleasant effect.

## TO PLAY STEREOPHONIC RECORDS

Withdraw the turnover type of plug in pickup head of the record changer by firmly pulling it from the end of the arm. Take care that the stylus does not get knocked and damaged in this operation.

Plug in the stereophonic pickup head in place of the one removed.

Turn Function Selector on radio chassis controls to "Stereo."

Then proceed as detailed above for records other than stereophonic.

Be sure to set up the Balance Control before playing stereophonic records, as shown above under *Balance*.

# **AUTOMATIC RECORD CHANGER**

## **DESCRIPTION**

The record changer used in this radiogram will play automatically any number of records up to 10, either 7-inch, 8-inch, 10-inch or 12-inch diameter at 16  $\frac{2}{3}$ , 33  $\frac{1}{3}$ , 45 or 78 r.p.m. 10-inch and 12-inch 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 sizes mentioned, if they are of similar speed, may be played at the same loading providing the smallest diameter records are placed above the larger ones. 7-inch 45 r.p.m. records with large centre hole may be played using 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 record off spindle; if replaying the same records, lift clear off 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, pickup will return to its rest and the changer switch off.

## 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 a turn-over pickup should show 78 or Std. (Green), and for fine-groove (Microgroove) records it should show 33/45 or LP (Red). 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.

## SERVICE

The facilities of our Service Divisions in Sydney, Melbourne, Adelaide, Perth and Newcastle, or the Service Division of our Distributors, Brisbane, are at the disposal of your retailer should any assistance be necessary.

# AUSTRALIAN MEDIUM - WAVE BROADCASTING STATIONS

Frequency Kc/s.	STATION	Frequency Kc/s.	STATION
540	<b>4QL LONGREACH</b>	890	<b>5AN ADELAIDE</b>
	7SD SCOTTSDALE	900	2LM LISMORE
550	<b>2CR ORANGE</b>		6BY BRIDGETOWN
560	<b>2ML MURWILLUMBAH</b>		7AD DEVONPORT
	<b>6WA WAGIN</b>	910	<b>4QB MARYBOROUGH</b>
	7BU BURNIE	920	2NL COOMA
580	<b>3WV HORSHAM</b>		4VL CHARLEVILLE
590	<b>4QR BRISBANE</b>		6NA NARROGIN
600	<b>4AT ATHERTON</b>	930	3UZ MELBOURNE
	<b>6NM NORTHAM</b>	940	<b>4QY CAIRNS</b>
	<b>7ZL HOBART</b>		<b>7ZR HOBART</b>
610	<b>2FC SYDNEY</b>	950	2UE SYDNEY
620	<b>3AR MELBOURNE</b>	960	3BO BENDIGO
630	<b>4QN TOWNSVILLE</b>		4AY AYR
	<b>7QN QUEENSTOWN</b>		6TZ BUNBURY
640	<b>5CK PORT PIRIE</b>	970	5DN ADELAIDE
650	<b>2NU TAMWORTH</b>	980	2KM KEMPSEY
	<b>6AL ALBANY</b>		6AM NORTHAM
660	2BH BROKEN HILL	990	2GZ ORANGE
670	<b>2CO ALBURY</b>	1000	3HA HAMILTON
	<b>*5KN KATHERINE</b>		6PM PERTH
680	<b>2KP KEMPSEY</b>		4RO ROCKHAMPTON
	<b>*5TC TENNANT CREEK</b>	1010	4CA CAIRNS
690	4KQ BRISBANE		4IP IPSWICH
	<b>6WF PERTH</b>		6GE GERALDTON
700	<b>2NR GRAFTON</b>		7EX LAUNCESTON
710	<b>7NT LAUNCESTON</b>	1020	2KY SYDNEY
720	<b>2TR TAREE</b>	1030	3DB MELBOURNE
	<b>4QA MACKAY</b>	1040	5PI CRYSTAL BROOK
	<b>6GF KALGOORLIE</b>	1050	2CA CANBERRA
	7QT QUEENSTOWN	1060	48B KINGAROY
730	5CL ADELAIDE	1070	2RG GRIFFITH
740	<b>2BL SYDNEY</b>		6WB KATANNING
750	<b>4QS TOOWOOMBA</b>	1080	2MO GUNNEDAH
760	<b>2NB BROKEN HILL</b>		<b>*4MI MT. ISA</b>
770	<b>3LO MELBOURNE</b>		7HT HOBART
780	2KA MELBOURNE		6IX PERTH
	4TO TOWNSVILLE	1090	3LK LUBECK
	6VA ALBANY	1100	4IG LONGREACH
790	<b>4QG BRISBANE</b>		6MD MERREDIN
800	5RM RENMARK		7LA LAUNCESTON
810	<b>2BA BEGA</b>	1110	2UW SYDNEY
	<b>6WN PERTH</b>	1120	4BC BRISBANE
820	<b>2GL GLEN INNES</b>	1130	2AD ARMIDALE
830	<b>3GI SALE</b>		3CS COLAC
	<b>6GN GERALDTON</b>		6CI COLLIE
840	<b>4RK ROCKHAMPTON</b>	1140	2HD NEWCASTLE
850	<b>2CY CANBERRA</b>	1150	2WG WAGGA
860	4GR TOOWOOMBA	1160	4MB MARYBOROUGH
	7HO HOBART		<b>5PA PENOLA</b>
	6KG KALGOORLIE	1170	2CH SYDNEY
870	2GB SYDNEY	1180	3KZ MELBOURNE
880	3UL WARRAGUL	1190	2NZ INVERELL
	4WK WARWICK	1200	5KA ADELAIDE
	6PR PERTH	1210	2GF GRAFTON

# AUSTRALIAN MEDIUM - WAVE BROADCASTING STATIONS

Frequency Kc/s.	STATION	Frequency Kc/s.	STATION
1210	3YB WARRNAMBOOL	1440	2MW MURWILLUMBAH
	6KY PERTH		3CV MARYBOROUGH
1220	4AK OAKEY	1450	2MG MUDGEE
1230	<b>2NC NEWCASTLE</b>		5AU PORT AUGUSTA
1240	3TR SALE	1460	2NM MUSWELLBROOK
	<b>9PA PORT MORESBY</b>		5MU MURRAY BRIDGE
1250	2DU DUBBO	1470	3MA MILDURA
1260	3SR SHEPPARTON	1480	2BE BEGA
1270	2SM SYDNEY		4ZR ROMA
1280	3AW MELBOURNE	1490	2AY ALBURY
1290	4BK BRISBANE	1500	2BS BATHURST
1300	2TM TAMWORTH		3AK MELBOURNE
1310	5AD ADELAIDE		<b>5DR DARWIN</b>
1320	3BA BALLARAT	1510	<b>2NA NEWCASTLE</b>
1330	3SH SWAN HILL	1520	2QN DENILIQUIN
	4BU BUNDABERG	1530	2VM MOREE
1340	2LF YOUNG		<b>5AL ALICE SPRINGS</b>
1350	3GL GEELONG		<b>5IN PORT LINCOLN</b>
	4GY GYMPIE	1540	<b>2CN CANBERRA</b>
1360	2NX BOLWARRA	1560	2RE TAREE
1370	2LT LITHGOW	1570	<b>2LG LITHGOW</b>
	5SE MT. GAMBIER		<b>4GM GYMPIE</b>
1380	2GN GOULBURN		<b>3WL WARRNAMBOOL</b>
	4MK MACKAY	1580	<b>5WM WOOMERA</b>
1390	4BH BRISBANE		<b>*2WN WOLLONGONG</b>
1400	2PK PARKES		<b>5MG MT. GAMBIER</b>
1410	2KO NEWCASTLE	1590	<b>4SO SOUTHPORT</b>
1420	3XY MELBOURNE		<b>5MV RENMARK</b>
1430	2WL WOLLONGONG	1600	3NE WANGARATTA

Note: National Stations are indicated by heavy type.

\* May not yet be in operation.

## THE GRAMOPHONE COMPANY LIMITED

(Incorporated in England)

HOMEBUSH - N.S.W.

# WARRANTY

Customer: .....

Retailer: .....

Model Type..... Serial No..... Date of Purchase.....

## IMPORTANT NOTICE

Claims under this Warranty should in the first instance be made to your "HIS MASTER'S VOICE" Retailer, who should be able to locate the trouble and often apply a quick remedy.

He will also be able to advise if the fault is due to some part of the installation outside the instrument itself, and not covered by the Warranty.

Your Retailer is entitled to make a charge for carriage and packing costs.

If your instrument is located more than 3 miles beyond a Retailer's business premises, a mileage charge may also be made.

## TERMS OF WARRANTY

In the event of any defect becoming apparent in this instrument due to either FAULTY MATERIAL or WORKMANSHIP within a period of 90 DAYS from date of delivery, such defect will be rectified, without cost to you for either labour or material, at the premises of the Accredited Retailer FROM WHOM THE INSTRUMENT WAS PURCHASED.

## CONDITIONS

- (1) The Warranty is applicable only to the original purchaser who has purchased from an Accredited "HIS MASTER'S VOICE" Retailer at the Company's published retail selling price and any claim must give particulars of the serial number and type, and date of purchase.
- (2) The Warranty does not cover (a) batteries or accumulators, which are usually guaranteed by their respective makers; (b) damage resulting from incorrect installation or use other than in accordance with the operating instructions issued by the Company; (c) consequential damage.
- (3) The Warranty will be rendered invalid if the instrument is misused or if any unauthorised alteration, modification or substitution of any part of it be made or if the serial number be defaced or altered.
- (4) Should it be necessary to return the instrument, or any part, to the Company or Distributor, cost of transportation both ways to and from the Company or Distributor must be carriage paid to the destination, the Company or Distributor accepting no responsibility for damage in transit.
- (5) If the instrument or any part is returned for any cause not covered by this Warranty, all costs involved including a charge for inspection and handling must be paid.
- (6) IF ANY SERVICE UNDER THIS WARRANTY IS GIVEN BY THE COMPANY OR DISTRIBUTOR AT THE USER'S HOME, A CHARGE WILL BE MADE FOR TRAVELLING EXPENSES AND LABOUR.
- (7) No Retailer has any authority to vary the terms of this Warranty.

## VALVE WARRANTY

The valves used in this instrument are guaranteed by the valve manufacturer for a period of three calendar months from the date of purchase of the instrument. This warranty is only given in respect of faulty workmanship and material and does not cover misuse or consequential damage.

Claims under the valve Warranty will only be considered if the valve is returned, with details of the Model No. and Serial No. of the instrument from which to was removed, to the Company or Distributor through the Radio Retailer from whom the instrument was purchased.

## NOT TRANSFERABLE

THE GRAMOPHONE COMPANY LIMITED  
(Incorporated in England)

HOMEBUSH :: N.S.W.

# "HIS MASTER'S VOICE"