



**ASTOR ELECTRONICS PTY. LTD.**

DIVISION OF ELECTRONIC INDUSTRIES LTD., BOX 183, P.O. SOUTH MELBOURNE

Reg. Office: Astor House, 161-173 Sturt St., South Melbourne.

GDO49 - 1

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## SERVICE DATA

# ASTOR MODEL GDO49

## SOLID STATE STEREOPHONIC RECORD PLAYER



Supply Source

240 Volts 50Hz

Power Consumption

20 Watts approx.

Power Output

500 milliWatts per channel

### ACCESS TO INTERIOR

Disengage both speaker box lids from cabinet base and remove four screws fastening motor board to cabinet. Lift this section out of cabinet base.

### CHASSIS SERIAL NUMBER

Located on metal chassis and is visible when motor board is removed from cabinet base.

**CAUTION:** Disconnect receiver power lead plug from mains socket before making adjustments inside the cabinet.

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MECHANICAL

## PART NUMBER

## DESCRIPTION

CABINET BASE

Refer Styling	Cabinet Base
7109-099-03	Handle
7109-073-04	Cover plate (2) decorative
7109-073-01	Cover plate (2) clamping
7198-127-20	Screw (2) 5/8" x 5/32" Whit. C'sk. Hd. - handle
7148-303-11	Nut (2) 5/32" Whit. Hex. - handle
7262-510-01	Washer (2) 5/32" Ext. S/P. - handle
7112-070-01	Hinge (2) includes half on speaker box
7086-150-02	Eyelet (4) hinge
7049-011-01	Catch (2)
7086-088-03	Eyelet (4) catch
7187-811-01	Foot (4) black
7201-627-22	Screw (4) 7/8" x No. 6 Phillips Oval C'sk. Hd. - motor board to cab. base.

SPEAKER BOXES

Refer Styling	Lid (2)
7009-161-03	Baffle (2)
	Hinge (2) part of cab. base hinge
7201-577-23	Screw (8) 5/8" x No.6 Phillips Hd. - speaker baffle mount
7152-276-01	Speed nut (8) speaker mount
7234-153-02	Retainer (4) speaker lead
7198-177-19	Screw (4) 3/8" x 5/32" Whit. Rd. Hd. - retainer
7086-150-02	Eyelet (4) hinge
7049-011-03	Catch (2)
7049-011-02	Scratch plate (2) catch
7086-088-03	Eyelet (4) catch
7031-042-02	Grommet (2) speaker lead

STYLING

	<u>BEIGE GDO49-A</u>	<u>BLUE GDO49-X</u>	<u>ORANGE GDO49-F</u>
Base	7016-161-01	7016-161-02	7016-161-03
Lid (L.H.)	7132-063-21	7132-063-22	7132-063-23
Lid (R.H.)	7132-063-71	7132-063-72	7132-063-73

## MECHANICAL

### PART NUMBER

### DESCRIPTION

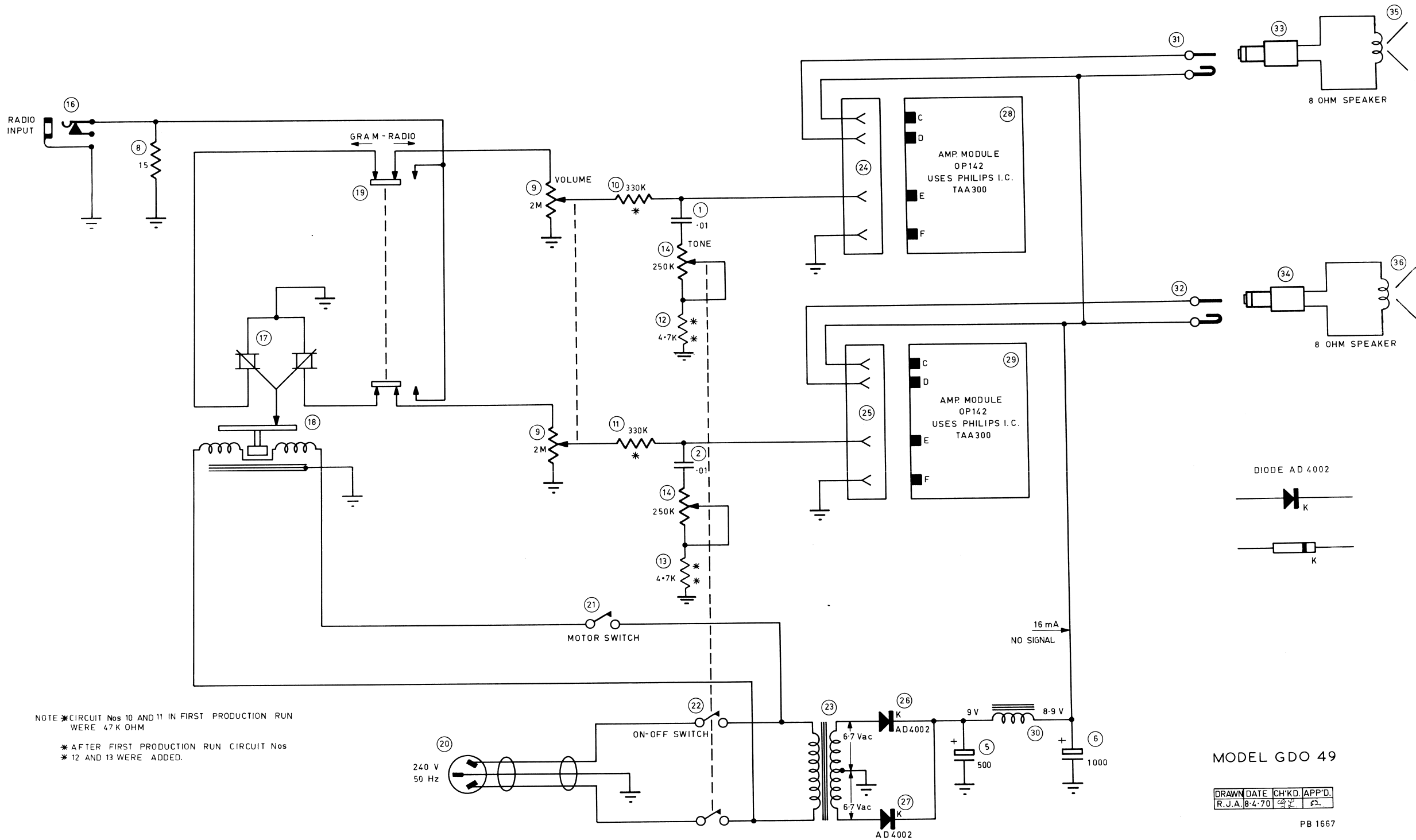
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#### CHASSIS

7196-334-28	Screw (6) 1/2" x 8 BA. Ch. Hd. - speaker socket and switch mount
7146-009-06	Nut (4) 8 BA. Hex. - speaker socket mount
7262-007-01	Washer (4) 7/64" Int. S/P. - socket mount
7293-018-01	Spacer (4) speaker socket mount
7293-043-01	Spacer (2) switch mount
7198-076-06	Screw (4) 1/2" x 1/8" Whit. Ch. Hd. - connector mount
7148-302-11	Nut (4) 1/8" Hex. - connector mount
7262-008-01	Washer (4) 1/8" Int. S/P. - connector mount
7293-025-01	Spacer (4) connector mount
7201-576-11	Screw (4) 3/8" x No.4 Phillips Hd. - transformer mount
7152-751-01	Speed nut (4) transformer mount
7231-102-01	Terminal strip (2) type 1E1
7231-024-01	Terminal strip (1) type E4E
7150-858-01	Nut (2) 3/8" Hex. - volume and tone controls

#### MOTOR BOARD

7021-239-12	Motor Board
4070-003-01	Replacement Pick-up Arm Assembly Includes: Fixing nut Rubber grommet (2) Pick-up rest, screw and washer Stylus protection cover.
7204-577-14	Screw (4) 3/8" x No.6 Phillips Hd. - chassis mount
7185-035-02	Retainer (2) mains cord
7201-576-11	Screw (2) 3/8" x No.4 Phillips Hd. - cord retainer
7054-051-01	Clamp (1) metal - mains cord
7055-576-01	Clamp (1) plastic - mains cord
7198-176-38	Screw (3) 7/8" x 1/8" Whit. Rd. Hd. - motor mount
7148-302-11	Nut (2) 1/8" Whit. Hex. - motor mount
7279-005-02	Nut plate (1) motor mount
7262-508-01	Washer (7) 1/8" Int. S/P. - various
7160-500-01	Panel (1) designation
7124-475-02	Knob (2)
7225-035-01	Clip (2) knobs



### AUDIO AMPLIFIER GAIN AND BALANCE TEST

Audio Frequency Generator - 1000Hz - 600 Ohms impedance  
Output Meter - 8 Ohms  
Volume Control - Maximum, clockwise  
Tone Control - Maximum treble, clockwise  
Function Switch - Gram position

Disconnect pick-up leads from cartridge.

Connect audio generator output leads to left channel pick-up leads.

Connect an 8 Ohm speaker to the right channel speaker socket, and the output meter to the left channel speaker socket.

Set the output of the audio generator to 125 milliVolts.

With the equipment connected as above, the output meter should read a minimum of 50 milliWatts.

Exchange audio generator, output meter and speaker connections to opposite channels.

Difference in output between the two readings must not exceed 3dB.

### SPEAKER PHASING

It is essential that the speakers be phased correctly.

If a speaker has to be removed for service, note the lead connections to ensure correct phasing when reconnecting.

A method used for checking the phasing of the speakers is detailed in the following paragraphs.

1. Play a monophonic record.
2. To conduct the following test the speaker cabinets should be spaced about six feet apart and the listener should be located about four feet out in front of the centre point between the two cabinets.
3. If the phasing is correct, the reproduced sound will appear to be radiated from this centre point.
4. With incorrect phasing, the quality of reproduction will be poor, it will appear to be lacking in bass response and will appear to be radiated from both speaker cabinets.
5. If the speakers are incorrectly phased, reverse the leads connected to the voice coil terminals of one speaker then repeat the test detailed above.

### PICK-UP STYLUS PRESSURE ADJUSTMENT

The stylus pressure is to be approximately 5 grammes. A pressure gauge Part No. 4121-013-01 is available from the Spare Parts Division.

To check the pressure, ensure the unit is level with no record on the turntable. Place pressure gauge on the turntable then lower pick-up arm so that stylus locates into the hollow provided on gauge. Adjust for balance and note reading.

Should the pressure be outside the required reading, adjust the arm as follows.

Lift the pick-up arm to full extent. Located on the pick-up arm near the pivot point, a coiled spring is attached between a lug on the pivot rod and a flat steel spring on pick-up arm. This is fitted under tension.

To adjust the pressure, slide the spring from the slot and refit at the correct tension. Increase spring tension to reduce stylus pressure. Decrease spring tension to increase stylus pressure.

# COMPONENT PARTS LIST

Circuit No.	Value	Description	Tol ±	Rating	Part Number
1	.01uF	Polyester Capacitor	10%	160V	4009-014-17
2	.01uF	Polyester Capacitor	10%	160V	4009-014-17
3					
4					
5	500uF	Electrolytic Capacitor		15V	4005-014-18
6	1000uF	Electrolytic Capacitor		15V	4005-025-14
7					
8	15 ohm	Carbon Resistor	10%	.5W	4022-053-01
9	2M ohm	Volume Control - Ganged Potentiometer			4034-001-12
10	330K ohm	Carbon Resistor	10%	.5W	4022-047-01
11	330K ohm	Carbon Resistor	10%	.5W	4022-047-01
12	4.7K ohm	Carbon Resistor	10%	.5W	4022-005-01
13	4.7K ohm	Carbon Resistor	10%	.5W	4022-005-01
14	250K ohm	Tone Control - Ganged Potentiometer DP. ST. Switch attached			4034-010-03
15					
16		Socket - Radio Input			7222-172-01
17		Pick-up Arm (BSR Type PU34) and Stereo Cartridge (BSR Type SX5M) Fitted with Sapphire LP and 78 Stylus assembly			4070-003-01
18		Turntable and Motor assembly (BSR Type M100) 4 Speed 240 Volt 50Hz operation			4060-008-01
19		Switch - Gram - Radio			4059-245-01
20		Mains Lead and Plug Assy.			4078-074-02
21		Switch - Gram Motor			4059-218-01
22		Switch - Part of Tone Control			
23		Power Transformer			4041-085-01
24		Connector - Module			7059-035-01
25		Connector - Module			7059-035-01
26		Diode type AD4002			4127-114-01
27		Diode type AD4002			4127-114-01
28		Module - Audio Amp.			4067-022-01
29		Module - Audio Amp.			4067-022-01
30		Choke			4048-053-01
31		Socket - Speaker			7222-181-01
32		Socket - Speaker			7222-181-01
33		Plug - Speaker			7171-141-01
34		Plug - Speaker			7171-141-01
35		Speaker - 4" dia. type C4D36/43/8			4056-011-11
36		Speaker - 4" dia. type C4D36/43/8			4056-011-11
		Lead Assy. - Radio Input includes:			4078-088-01
		Plug - Gram			7171-143-01
		Plug - Radio			7171-015-01
		Lead - 18" required			1171-054-08
		Lead Assy. (2) Speakers includes:			4078-085-01
		Plug - Speaker			7171-141-01
		Lead - 7 ft. required			1171-053-08

# INTEGRATED CIRCUIT AMPLIFIER MODULE

PART NUMBER 4067-022-01

## COMPONENT PARTS LIST

Circuit No.	Value	Description	Tol ±	Rating	Part Number
1	2uF	Electrolytic Capacitor		12V	4005-005-14
2	2uF	Electrolytic Capacitor		12V	4005-005-14
3	100uF	Electrolytic Capacitor		12V	4005-002-46
4	10uF	Electrolytic Capacitor		10V	4005-007-24
5	250uF	Electrolytic Capacitor		10V	4005-011-19
6	.001uF	Ceramic Disc Capacitor		500V	4008-040-15
7	.047uF	Ceramic Disc Capacitor		25V	4008-057-04
8	4.7K ohm	Carbon Resistor	10%	1/2W	4022-005-01
9	4.7K ohm	Trimming Potentiometer			4025-038-02
10	220 ohm	Carbon Resistor	10%	1/2W	4022-017-01
11					
12		Integrated Circuit - type TAA300			4129-004-01
		Contact (2) test pin link			7060-022-02
		Pin (2) circuit board			7167-058-01
		Heat Sink (1) I.C.			7111-053-02

## ADJUSTMENT OF QUIESCENT CURRENT

This should be performed after an Integrated Circuit or associated componentry have been replaced.

EQUIPMENT : Current Meter - 0-50mA.DC. terminated with lead and socket assy. Part No. 4078-018-01, positive terminal to red sleeve.

CONDITIONS : Volume control set at minimum. No input signal. Connect an 8 ohm impedance speaker to amplifier. Remove link from pins "A" and "B" on I.C. module board. Place meter lead socket onto test pins "A" and "B". Connector with red sleeving is to be connected to pin "A".

Adjust 4.7K ohm potentiometer circuit No. 9 on I.C. Module board until a meter reading of  $8\text{mA} \pm 2\text{mA}$  is indicated.

Remove meter lead plug and reconnect link to test pins.

