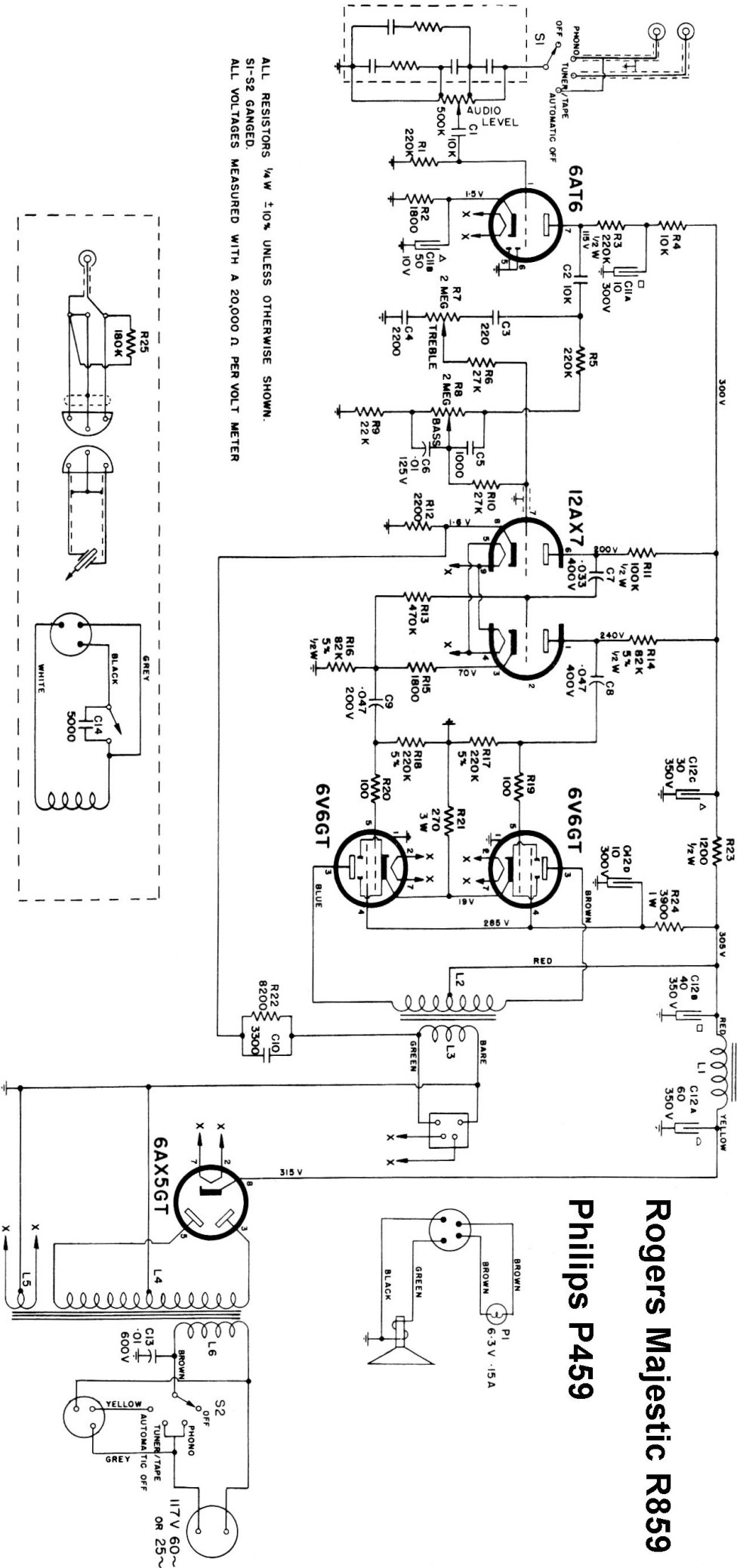


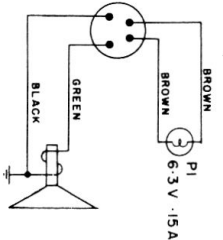
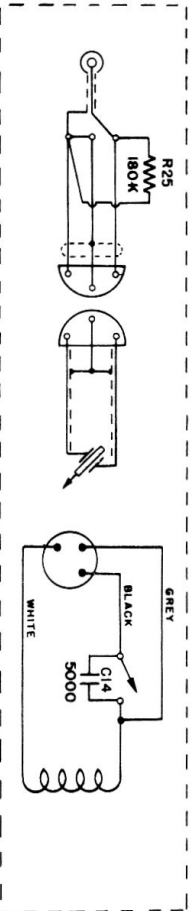
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# Rogers Majestic R859

## Philips P459



ALL RESISTORS  $\frac{1}{4}$  W  $\pm 10\%$  UNLESS OTHERWISE SHOWN.  
S1-S2 GANGED.  
ALL VOLTAGES MEASURED WITH A 20,000  $\Omega$  PER VOLT METER.



# HIGH FIDELITY RECORD REPRODUCER

## P459 - R859

### Description:

Model P459, R859 is a high fidelity equipment, primarily intended for the superlative reproduction of phonograph records. It consists of a 5-tube, 10 watt, high fidelity inverse feedback amplifier, a modern, super quality 12" loudspeaker of phenomenal efficiency, and an automatic record changer admirably suited to high fidelity music reproduction.

### SPECIFICATIONS

**Power Supply:** 117 volts (two versions 60 and 25 cycles).

**Power Consumption:** 70 watts.

**Frequency Range:** 20 — 20,000 cycles.

**Output:** 10 watts at less than 2% total distortion 14W maximum.

**Tube Complement:** 6AT6 1st preamplifier.  
12AX7 2nd preamplifier and phase splitter.  
6V6GT (2) Push-pull output.  
6AX5GT Full-wave rectifier.

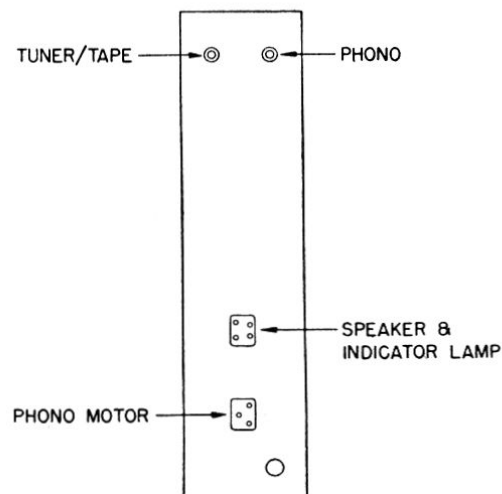
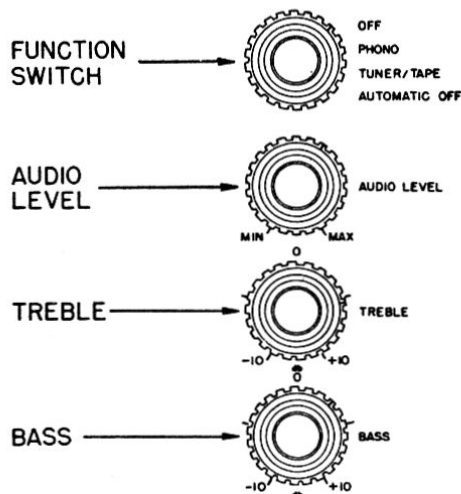
**Record Changer:** Philips, Type AG1004 3-Speed automatic record changer. All sizes of records may be played. AG7001 45 r.p.m. spindle adapter included.

**Cartridges:** AG3012 standard groove sapphire, high fidelity.  
AG3013 microgroove sapphire, high fidelity.

**Loudspeaker:** Philips, Type 9762/05 12" biconal loudspeaker in an infinite baffle enclosure. Accoustic efficiency 14%. Power handling capacity 20 watts.

**Optional Accessories:** High-output dual sapphire cartridge, Type AG3010. High fidelity microgroove cartridge with diamond stylus, type AG3015. 45 r.p.m. automatic spindle, Type AG7002.

### Controls:



**Amplifier:** The high fidelity amplifier is equipped with four controls as follows:

1. **Function Switch:** OFF-PHONO-TUNER-TAPE-AUTOMATIC-OFF.

In the OFF position the entire instrument is switched off.

In the PHONO position the amplifier is switched on and power is supplied to the record changer. It will not run, of course, until the start lever on the record changer is operated.

In the TUNER-TAPE position the amplifier input is switched from the record changer to a socket at the rear of the chassis, to which an AM/FM tuner or tape recorder may be connected.

In the AUTOMATIC OFF position, the circuit is so arranged that after the last record of a stack has been played, not only the record changer but also the amplifier is switched off, thus permitting completely unattended operation.

2. **Audio Level:** As the name implies, this control adjusts the level of reproduction. However, it differs from ordinary volume control in that an automatic frequency response compensation is brought into play as audio level is altered, so that at all times a correct balance is maintained between high and low tones.
3. **Treble:** This control permits individual adjustment of high tone response in accordance with record play-back characteristics for instance, or personal choice. The range of control is from — 10 db to + 10 db.
4. **Bass:** This control performs the same function as in 3, but for the low tone response. The range of control is from — 10 db to + 10 db.

#### OPERATION:

Plug the line cord into an a-c power source of 117 volts, of the correct frequency. The power line plug should be oriented for minimum hum.

Set the FUNCTION switch to PHONO.

Place records upon the record changer and operate START lever. See separate pamphlet for complete description and operating instructions for record changer. Adjust AUDIO LEVEL, TREBLE and BASS controls to suit individual choice. Normally the FUNCTION switch will remain at PHONO, but it can be turned to AUTOMATIC OFF at any time during the playing of a record or records.

If it is desired to reproduce, say, a radio program or a tape recording, it will be necessary to insert the output connector of a radio tuner or tape recorder into the TUNER-TAPE socket at the rear of the chassis, and set the FUNCTION switch to TUNER-TAPE. It is pointed out that any ancillary device connected to the socket must have its own power supply, as the amplifier is not designed to carry any additional load.



**Circuit Voltages** — See schematic diagram.

**Amplifier Sensitivity** — Should be checked under the following conditions:

1. Line voltage adjusted to 117V 25 or 60 cycles according to model.
2. Output meter connected to loudspeaker socket, loudspeaker disconnected.
3. Output meter impedance set to six ohms.
4. Set audio signal generator to 400 cycles and connect the output to phono input socket.
5. Function switch in position 2 (Phono).
6. Set loudness, Bass and Treble controls to maximum (full clockwise) position.

The generator output should be as follows:

62 mV  $\pm$ 10% for 500mW audio output.

350mV  $\pm$ 10% for 10W audio output.