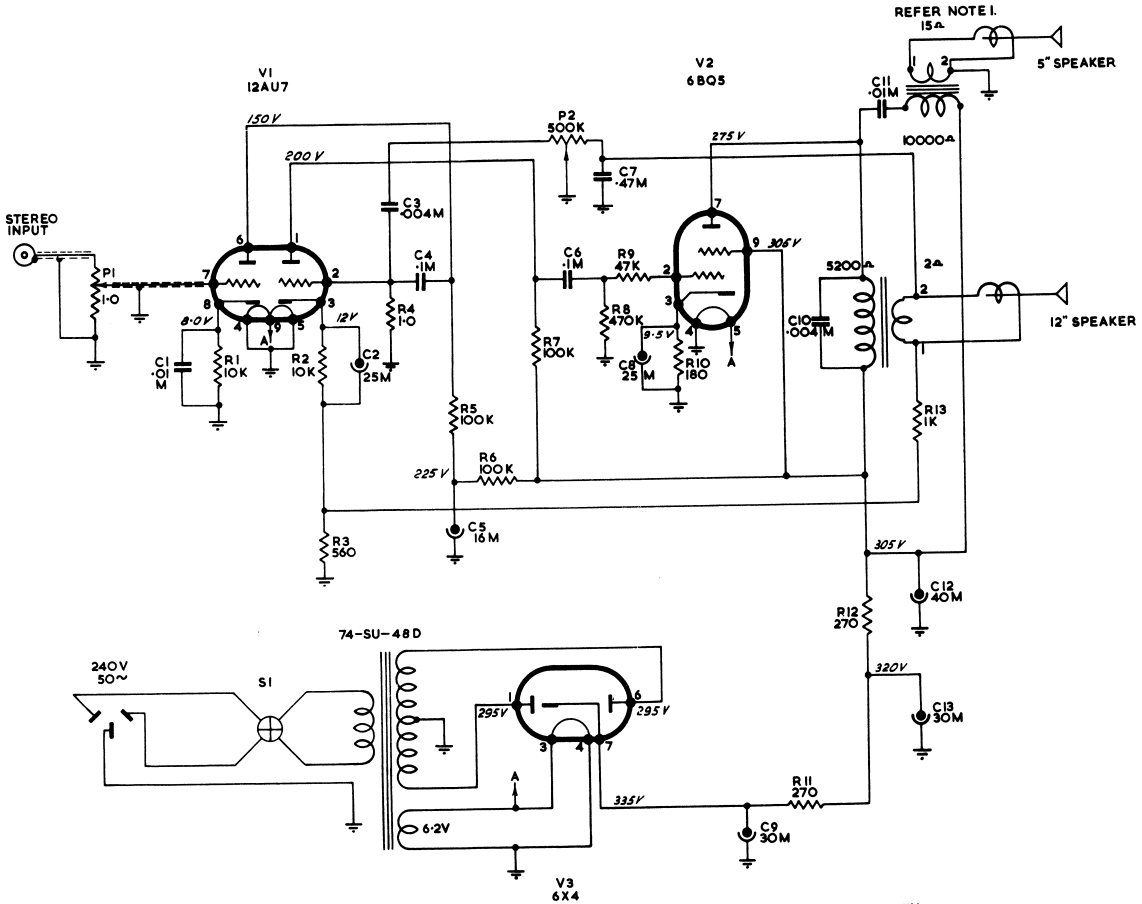
MODEL A 3091, 3091/1

STEREOPHONIC CONVERTER



NOTE:—THE MANUFACTURER RESERVES THE RIGHT TO CHANGE COMPONENTS OR CIRCUIT ARRANGEMENTS WITHOUT NOTICE.

P2 AND S1 ARE GANGED AND SHOWN IN 'OFF' POSITION.

NOTE 1—MOD. 3091 USES 3½Ω V/C ON 5" SPEAKER.

SPECIFICATION OF MODEL A3091, A3091/1

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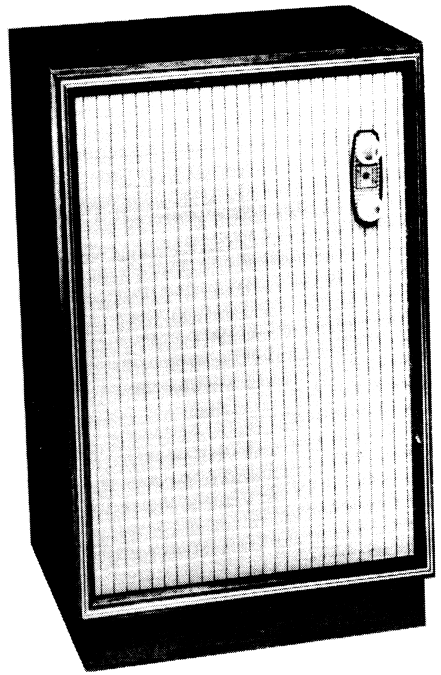

DESCRIPTION:

An A.C. operated three valve stereophonic converter amplifier incorporating:-

(1) Tone control and power switch combined. (SP40783N)
(2) Bass boost and treble cut, with inverse feedback.
(3) A stereophonic turnover pick-up cartridge. TC8S (Styli, S35, Std. S35 Stereo.)
(4) Heavy duty power output valve.
(5) A 12" loudspeaker and a 5" extended range loudspeaker.
(6) SP40783M, 1 Meg. Volume Control.

VALVE COMPLEMENT:

V1 Audio amplifier 12AU7
V2 Output pentode 6BQ5
V3 H.T. rectifier 6X4.

POWER SUPPLY:

230 – 250 Volts 50 Cycles A.C.
180 Milliamps with 240 Volt input.
74–SU–48D power transformer

LOUDSPEAKERS:

12'' permanent magnet loudspeaker with a 5200 ohm transformer mounted on the chassis. (SP54555A 12'' Speaker, SP54565C Transformer)

5'' permanent magnet loudspeaker with a 10,000 ohm transformer mounted on the chassis. (RS517.73 Speaker, RS507.33 Transformer) In the model A3091/1 the voice coil impedance of the 5'' speaker used is 15 ohms. (SP54556 5'' speaker, SP54565D transformer)

CIRCUIT VOLTAGES:

Refer to circuit diagram.

These voltages may vary within 10% of their stated values.

Measuring meter must be at least 20,000 ohms per volt.

GENERAL INFORMATION:

The S.T.C. Stereophonic Converters have been developed to provide the facilities for reproducing the new stereophonic gramophone records in conjunction with any existing radiogram incorporating one of the popular makes of three or four speed record players or changers fitted with lightweight pick-ups.

Model A2091EA, together with the accessories supplied, is designed to provide the second channel for playing stereophonic records in conjunction with practically any conventional five valve radiogram manufactured in Australia over the past five years.

Model A3091EB is intended for a similar application, but has been designed specially for use in conjunction with high fidelity radiograms with six or more valves.

EQUIPMENT SUPPLIED:

Each stereophonic conversion kit comprises the following items:-

(a) S.T.C. Stereophonic Converter of the type ordered, complete with power cable and 10ft. of screened stereo cable.
(b) A stereophonic pick-up cartridge, complete with mounting bracket. This pick-up is a turnover type fitted with a 0.00075'' sapphire stylus for stereo and LP and a 0.0025'' sapphire stylus for 78 r.p.m. records.
(c) An additional flexible lead, complete with connector, for conveying the second channel output down the pick-up arm of the existing record player or changer.
(d) A 2ft. screened cable, complete with connector and mounting screws, for making the output of the second channel available at the rear of the existing radiogram.

INSTALLATION:

Although minor details of the installation procedure may vary according to the type of radiogram and record player or changer involved, it should be carried out along the following lines:-

(1) Remove the back cover from the radiogram and remove the clips or nuts securing the record player or changer to the motor board.

(2) Disconnect the push-on connectors from the existing monophonic pick-up cartridge and remove the cartridge and its mounting bracket from the pick-up arm.

(3) Insert the new flexible insulated lead into the pick-up arm, following the route taken by the existing wiring down to the terminal strip below the unit plate.

(4) Lift the record player or changer and, with a small soldering iron, remove any equalising network which may be connected to the terminal strip. Make sure that the earthed lead (usually either the braid of a screened cable or a separate black insulated wire) coming from the pick-up arm is connected only to the earthed lug of the terminal strip. Solder the new lead to a free terminal on the strip.

(5) Solder the 2ft. extension screened cable to the same terminal as the new pick-up lead, connecting the outer screen to the earthed lug. After testing, the socket at the end of this cable should be mounted on the rear cover of the radiogram as described in (9) below. Make sure that the existing screened cable from the chassis of the radiogram is still connected correctly to the terminal strip.

(6) Instal the new pick-up mounting in the arm, connect the three push-on connectors to the new stereophonic cartridge (the black or common lead going to the centre tag) and insert the cartridge in its mounting.

(7) Using a stylus pressure gauge, adjust the springs, screws or weights at the rear of the pick-up arm so that, when the stylus is at record playing level, the weight of the pick-up is from 6 to 10 grammes, according to whether the unit is a player or changer respectively. (The new stereophonic cartridge is slightly heavier than most existing types it will replace and therefore the stylus pressure must be reduced.

(8) Insert the plug at the end of the 10ft. screened cable from the stereophonic converter into the socket at the end of the 2ft. screened cable fitted as instructed in (5) above and connect both the radiogram and the converter to the power mains. (The converter has a separate power switch associated with the volume control in Model A2091EA and with the tone control in Model A3091EB.)

(9) When the complete system has been tested satisfactorily as a stereophonic reproducer, replace the clips or nuts securing the record player or changer to the motor board. With a small saw, cut a slot ½'' wide and about ¾'' long in the edge of the back cover of the radiogram at a convenient place behind the record player or changer. Replace the back cover of the radiogram and secure the output socket in the slot with the screws provided. In the case of radiograms where the record player or changer is moved forward for use, make sure that the freedom of movement is not restricted by the new cable.

OPERATION:

Place the stereophonic converter in a suitable position in the room 7 to 11 feet away from the loudspeaker, in the existing radiogram, with both speakers facing the preferred listening area. In this connection, it should be noted that the best stereophonic effect is obtained when the listeners are at least as far away from the speakers as the spacing between them.

With the speed control set correctly and the stylus at LP, place a stereophonic record on the player or changer. When the record commences to play, adjust the volume on the radiogram to a suitable level and then adjust the volume control on the stereo converter to a similar level, thus obtaining proper balance between the two channels. A little experience in using the new reproducing system will enable the desired volume levels to be obtained quickly and easily.

In the case of Model A3091 EB, the tone should be adjusted to provide a response similar to that obtained from the existing radiogram.

If it is desired to reverse the channels when the radiogram and the stereo converter are in their final positions in the room, this may be accomplished by simply interchanging the positions of the two outer push-on connectors at the rear of the pick-up cartridge.

Normal monophonic LP or 78 r.p.m. records may also be played on the two channel system with some improvement over the performance of a conventional radiogram although, of course, the stereophonic effect will be absent.