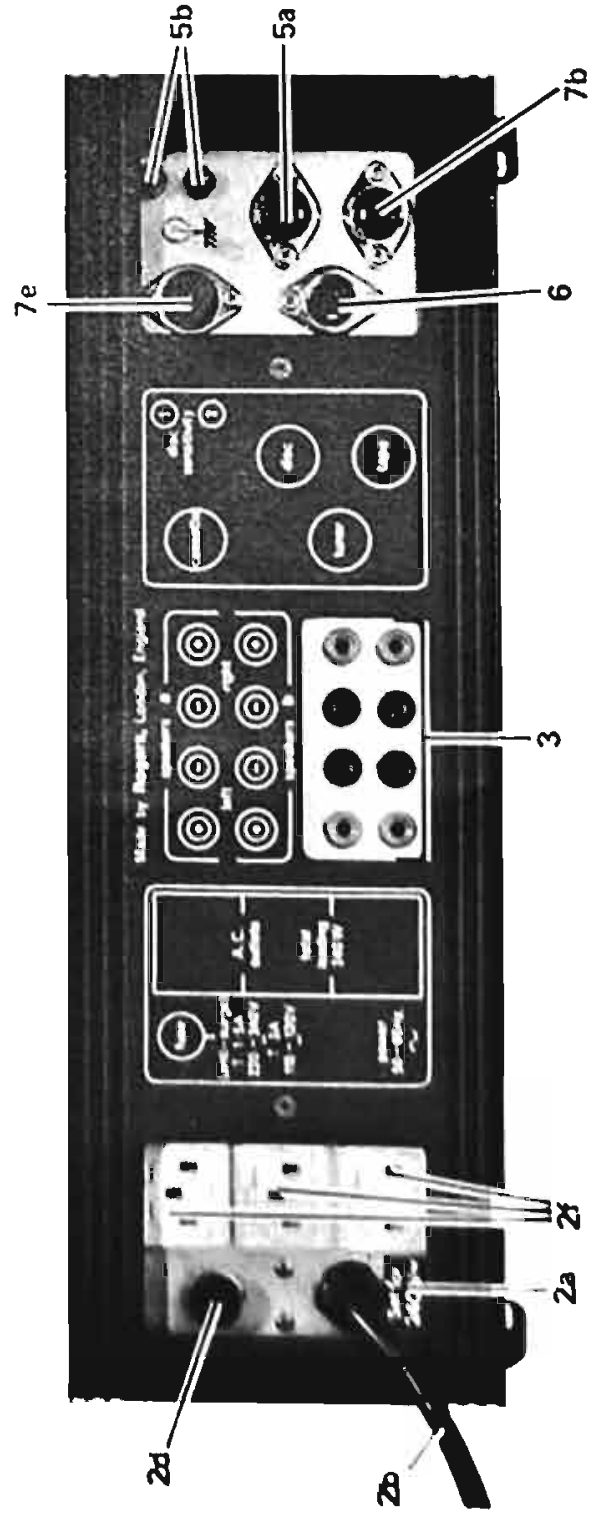
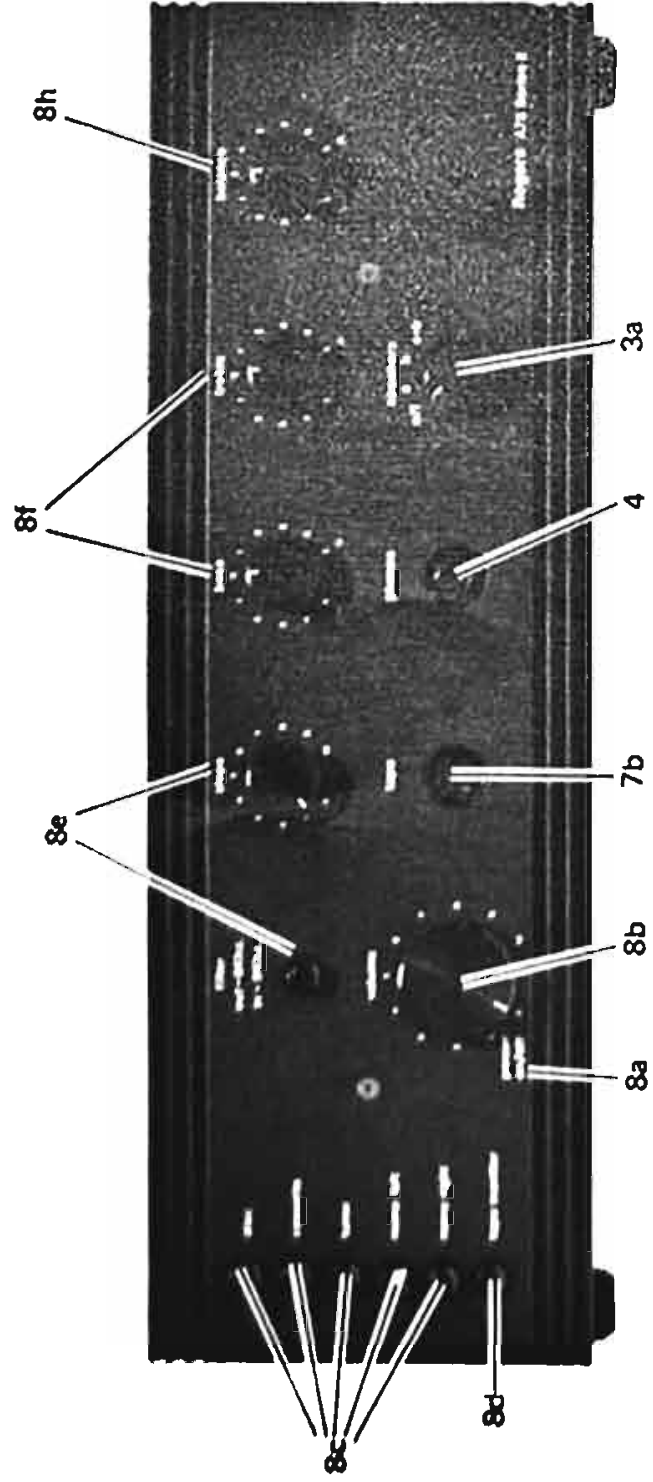


The Rogers A75 Series 2 Amplifier

**Installation and
Operation instructions**

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The A75 Series 2 Stereo Amplifier

Installation and Operation Instructions

1. We recommend that these instructions be read fully and carefully before any attempt is made to connect or use the amplifier.

2. Connection to Mains Power Supply


2a. Supply Connection

The mains supply voltage adjustment is set internally at the factory, the setting indicated by a label positioned underneath the mains cable entry. The 240V setting for the U.K. covers the normal day to day variations likely to be encountered. If for any reason the supply setting needs to be changed it should only be undertaken by a qualified service engineer. The instructions for carrying out this change can be found on the inside of the metal end cover of the amplifier chassis immediately above the mains transformer. When this change is carried out the mains supply voltage label **MUST ALSO BE CHANGED.**

2b. Supply Connection

WARNING: THIS AMPLIFIER MUST BE EARTHED. Connect a suitable 3-pin mains plug to the three core mains lead colour coded as follows:—

Green-Yellow	— Earth
Blue	— Neutral
Brown	— Live

As the colours of the wires in the mains lead of this amplifier may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:— The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked by the letter 'E' or by the safety earth symbol  or coloured Green or Green and Yellow.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter 'N' or coloured Black. The wire which is coloured Brown must be connected to the terminal which is marked with the letter 'L' or coloured Red.

2c. Mains Plug

It is strongly recommended that a three pin fused plug is fitted to the supply lead and that a three amp fuse is fitted, to provide protection to any equipment plugged into the A.C. Outlet sockets.

2d. Mains Fuse

Located on the rear chassis panel above the mains cable entry this fuse is for the protection of the amplifier circuitry only and **DOES NOT** protect the A.C. Outlet Sockets

The fuse type and rating should conform to the information given below:

Fuse Size	— 5 x 20mm
Fuse Type	— Anti-Surge — Surge Resisting — Trage (T)

Mains Supply	— 240V 230V 220V 120V 110V
--------------	----------------------------

Fuse Rating	— 1.5A 1.5A 1.5A 3.0A 3.0A
-------------	----------------------------

2e. Internal Fuses

Power Transistors

The four power transistors are each protected by a fuse of the following specification:—

Fuse Size	— 5 x 20mm
-----------	------------

Fuse Type	— Quick Blow — Straight — Flink (F)
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Fuse Rating	— 2.0A
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These fuses are located inside the chassis on and at the rear of the main amplifier printed circuit board and are designated FIL FIR F2L & F2R.

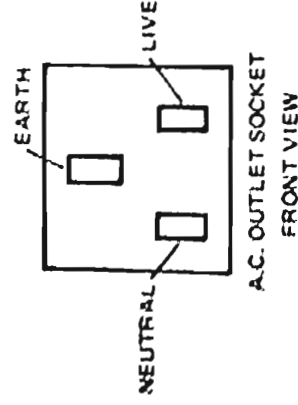
If one or other channel is 'dead' or badly distorted these fuses should be checked by a qualified service engineer and if blown, the reason for them blowing established, before replacement.

2f. A.C. Outlets

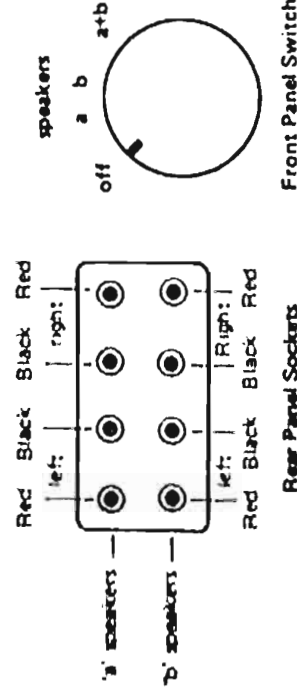
Three shuttered A.C. Outlet sockets are provided to supply power to ancillary equipment such as a tape or cassette recorder, tuner and turntable. The A.C. supply voltage available at these sockets will be the same as that supplied to the A75 Series 2 Amplifier and will be switched ON/OFF by the amplifier power switch on the front panel.

The sockets are not fused by the amplifier power fuse but will be protected by the (recommended) fuse in the mains plug. The combined power handling of the three sockets has been restricted to 240 watts so as not to exceed the rating of the power ON/OFF switch.

The wiring of the sockets conforms to convention as illustrated in the diagram below, assuming that the amplifier mains lead has been correctly connected to the supply (see Supply Connection).



3. Connection of Loudspeakers



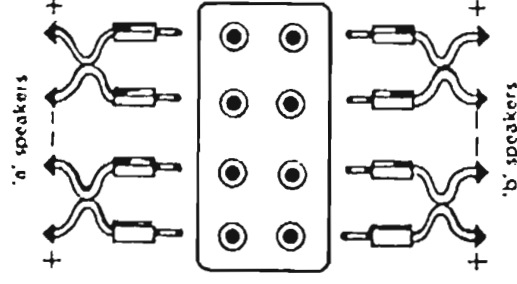
3a Facilities

Four pairs of 4mm sockets mounted on the rear chassis panel together with the speaker switch on the front panel allows for a flexible combination of stereophonic reproduction in one or two rooms.

The sockets are marked speakers 'a' and speakers 'b' and the front panel switch allows for the individual selection of speakers 'a' or speakers 'b', also the operation of two pairs of loudspeakers situated in different rooms. With the selector switch in the 'a + b' position all loudspeakers connected to the amplifier will be in operation and in the 'off' position all loudspeakers will be disconnected from the amplifier.

3b Phasing

It is important that the left and right hand loudspeakers are connected identically to each amplifier channel whether they be the 'a' speakers or the 'b' speakers. The red output socket on the amplifier should be connected to the red or positive marked terminal or socket on the loudspeaker and the black output socket should be similarly connected to the black or negative marked terminal or socket on the loudspeaker. Loudspeakers connected out of phase will result in a lack of bass and poorly defined stereo image.



3c. Left and Right

The loudspeakers are considered left and right when viewed from the listening position, and should be connected accordingly to the left and right output sockets of the amplifier.

3d. Impedance

The A75 Series 2 is not designed to work into loudspeaker impedances of less than 4 ohms, and where two pairs of loudspeakers are operated in the 'a + b' positions described above their combined impedance per channel should not be allowed to fall below 4 ohms. Thus if two pairs of loudspeakers are operated at the same time they should each have a nominal impedance of 8 ohms or more.

Warning

Failure to observe these instructions may result in the output transistor protection fuses being blown.

3e. Connecting Leads

The resistance of the connecting leads between the amplifier and the loudspeakers should be kept as low as possible and for runs up to 5 metres a flexible twin cable of 16/0.2mm each section should be used. For longer runs such as extensions into another room the cable rating should be increased to 24/0.2mm.

3f. Choice and Placement of Speakers

The choice of loudspeakers is a personal thing and it is advisable to listen to as many types as possible, reproducing the type of sounds you like and are familiar with, before purchasing. All loudspeakers will 'colour' the reproduced sound, some to a greater extent than others. Generally speaking the cheaper loudspeakers will introduce more colouration than the dearer ones. Rogers make a range of low colouration loudspeakers eminently suitable for use with the A75 Series 2 Amplifier.

Whatever speakers are chosen they should be capable of handling the power output of the A75 Series 2 Amplifier (see technical specification) and should conform to the impedance rating outlined in section (3d).

The dimensions, construction and furnishing of the listening room will play a large part in the quality of the sound heard via your A75 amplifier and choice of loudspeakers. The dimensions of the room and large items of furniture affect the low frequency performance, and the biggest problem here is due to standing wave resonances which occur below 200Hz and may impart a booming quality to the reproduced sound.

For a given listening room the best way to minimise this problem is to experiment with the position of the loudspeakers in the room bearing in mind that the corners of the room though often the most convenient positions for the loudspeakers are the worst positions for 'setting off' the main room resonances.

The middle and high frequency performance will be affected by the amount of soft furnishing in the room such as carpets, curtains, wall-coverings, soft chairs etc, and an excess of such items can produce a dull lifeless sounding listening room lacking in the higher frequencies. As the same room stripped of all soft furnishings will most certainly produce a bright hard sound with an excess of the higher frequencies it is possible for the furnishings of the listening room to be built up to provide a correct balance between the two undesirable extremes. In normal domestic circumstances this will resolve itself in a compromise between decor comfort and acoustic properties, with the bass and treble controls of the A75 being used for final correction.

For stereophonic reproduction the loudspeakers should be placed a minimum of two metres apart and angled inwards with the listener placed a similar distance from each speaker (see fig 1.) By further angling the speakers so that the axis of each crosses over in front of the listener a listening area for more than one person can be formed (see fig 2).

Fig. 1

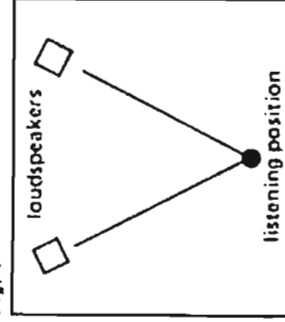
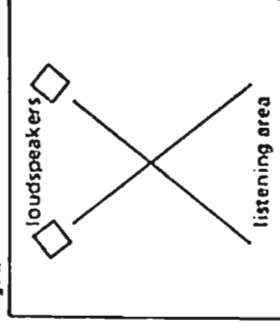


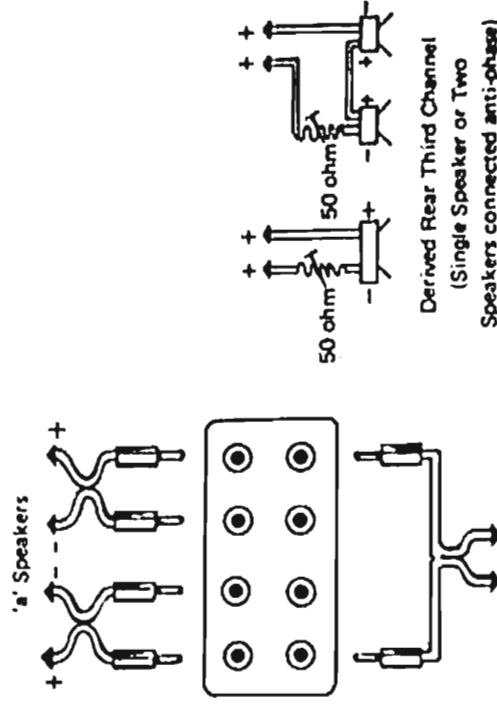
Fig. 2



3g. Derived Rear Third Channel

On certain programme material a considerable improvement in spaciousness and ambience can be obtained by connecting a third loudspeaker or pair of loudspeakers across the red terminals of the left and right hand loudspeaker output sockets with a 50 ohm Potentiometer connected in series to allow for level adjustment (see following diagram). These loudspeakers should be placed at the back of the room behind the listening position if possible and by connecting them to the speaker 'b'

outputs they can be switched in and out of circuit by operating the front panel speaker switch between 'a' and 'a + b'. Correctly set up there should only be a rear channel output from a stereo programme source, the actual output being the difference between left and right hand channels. With a mono programme source there should be the same output from both left and right hand channels and consequently there should be no 'difference' signal fed into the rear channel. Adjustment of the amplifier balance control should be made to achieve this.



4. Connection of Headphones

A standard ¼" jack socket situated on the front panel accepts the universal jack plug fitted to the majority of stereo headphones.

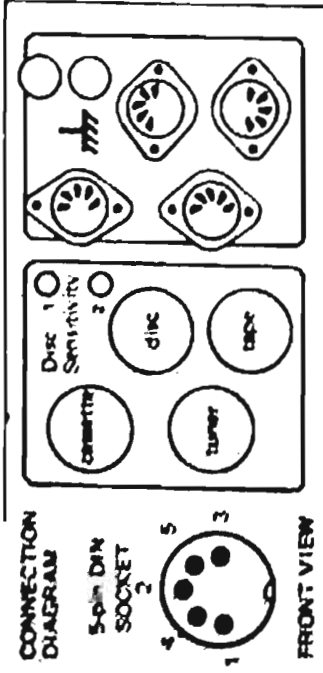
A signal is always available at this socket regardless of the position of the "speaker" switch. To listen to headphones ONLY set the speaker switch to 'off'. The signal level available at the jack socket is dependant on the impedance of the headphones used and is suitable for most types (except electrostatics) between 8 and 600 ohms.

Caution

When wearing the headphones the amplifier volume control should be set to minimum before plugging into the amplifier to prevent the possibility of listener discomfort.

Where the requirement exists to fit a stereo jack plug to the headphone lead the connections in the diagram below should be followed.





5. Connection of Record Player

5a. Connections

A 5-pin din socket marked 'disc' with connections conforming to din standard provides for the direct connection of a pre-wired record player unit fitted with a 5-pin din connecting lead. An earth tag or terminal marked /// and located above the disc socket is provided for pick up arms not integrated with the turntable motor plate and where a separate earth lead is provided. In the case of an integrated turntable/pick-up arm assembly the earth connection will be made via the mains lead EARTH. Where the pick-up lead is not terminated with a din plug the plug supplied with the amplifier should be wired as follows:—

Pin 1.	No Connection	Pin 5.	Right Channel
Pin 4.	No Connection	Pin 3.	Left Channel
Pin 2.	Signal Earth		

Alternatively, if the pick-up lead is fitted with phono plugs use the din to phono conversion lead supplied with the amplifier.

5b. Disc Sensitivity

Two push buttons marked 'disc sensitivity' 1 and 2 on the rear chassis panel of the amplifier provides four alternative sensitivities all equalised to the R.I.A.A. playback characteristic required for playing records using a magnetic cartridge.

The push button positions for the various sensitivities are as follows:—

1. In	2. Out	8.2mV	1. In	2. In	4mV
1. Out	2. Out	5.6mV	1. Out	2. In	2.7mV

5c. Magnetic Cartridge

To preserve the excellent overload properties of the A75 Series 2, disc pre-amplifier, the sensitivity push buttons should be set to give the closest agreement with the manufacturers specifications for the cartridge. If this information is not available all sensitivity positions should be tried in turn and the one giving a comfortable listening level with the volume control at mid (12 O'clock) position when playing an average level recording should be chosen.

NOTE: The sensitivity switches should **ONLY** be operated with the volume control at minimum.

5d. Magnetic Cartridge Specification

Cartridges are specified in two ways.

1. Output in Millivolts per one centimetre of record velocity at 1 KHz. Typical example 0.8mV/Cm/Sec recorded velocity 1KHz. An average level of recording has a peak recorded velocity of 5cm/Sec and the output from the above cartridge will be $5 \times 0.8\text{mV} = 4\text{mV}$. The selected disc sensitivity should therefore be 4mV.
2. Output in Millivolts per 5 centimetres of recorded velocity at 1KHz. Typical example 4mV/5cm/Sec recorded velocity at 1KHz. The output from this cartridge is also 4mV and the selected disc sensitivity should also be 4mV.

5e. Ceramic Cartridge

The modern ceramic cartridge can be fed into the disc input designed for magnetic cartridges by using a simple correcting network connected between the pick-up and the disc input. Most ceramic cartridge manufacturers specify networks suitable for the A75 Series 2 disc input impedance of 50K ohm. The disc sensitivity buttons should be set for 5.6mV or 8.2mV depending on which figure is closest to the manufacturers specification for their cartridges used under these conditions.

5f. Mono Records

For the correct reproduction of Mono Records played with a stereo cartridge the mono 'L' button should be depressed. This connects both disc input channels together and applies the combined signal to both loudspeakers.

6. Connection of Tuner (Radio)

6a. Stereo Connection

The 5-pin din socket marked 'tuner' with connections conforming to the din standard provides for the direct connection of the Rogers A75 Series 2 tuner using the din connecting lead provided.

In the case of other tuners where a din plug may be required to be fitted to a connecting lead the following wiring should be used.

Pin 1.	Left Channel
Pin 4.	Right Channel
Pin 2.	Signal Earth
Pin 5.	Not Connected
Pin 3.	Not Connected

The input impedance of 100 Kilohms and the sensitivity of 180 millivolts per channel allows for the compatibility with a large number of commercially available tuners.

6b. Mono Connection

The output from a mono tuner can be connected to either pins 1 or 4 of the tuner socket, the signal being fed to both loudspeakers by depressing either the mono 'L' or the mono 'R' selector button depending on which input pin is used.

7. Connection of Tape & Cassette Recorders.

7a. Facilities

Tape and cassette sockets provide facilities for (1) recording and playback from disc and tuner programme sources using open reel or cassette recorders (2) Transferring a recording from an open reel or cassette recorder plugged into the tape socket to a cassette recorder plugged into the cassette socket or visa versa, see schematic diagrams 1-9.

7b. Tape Socket

The 5-pin DIN socket located at the front of the amplifier and duplicated on the rear chassis panel provides for record and replay facilities for open reel and cassette recorders and has connections conforming to the din standard as follows:—

Pin 1. Record Left Output	Pin 5. Replay Right Input
Pin 4. Record Right Output	Pin 3. Replay Left Input
Pin 2. Signal Earth	

The selected signal from the tuner, disc or cassette inputs is always available for recording at pins 1 and 4 of the TAPE socket and is unaffected by the operation of any of the controls or the tape monitor button.

The tape socket replay pins 3 and 5 are only brought into circuit by depressing the tape monitor button allowing the recorded signal to be replayed through the amplifier at the same time disconnecting any of the selected inputs from the replay circuit. For tape or cassette recorders with separate record and replay heads, operating the tape monitor button during recording allows for direct comparison between the signal being recorded and that which has actually been recorded.

7c. Connecting Leads

The record signal available from the TAPE Socket will be found to be more compatible with the "LINE" input sockets of open reel or cassette recorders. The connecting lead thus required will be a 5-pin din to four phono plugs.

7d. Recorder Matching

Tape and cassette recorders have widely differing record and replay signal levels and impedances. To avoid the severe distortion that can arise when recording with a signal which is far too large for the recorder circuit to accommodate or which presents too severe a load on the amplifier tape socket, it is best to seek advice from your dealer as to the suitability of the recorder to be used.

Fortunately most of the problems of mismatching can be solved by having a special connecting lead made up which incorporates resistors for matching the amplifier to the recorder.

The following technical information will be required in order to provide for the correct matching between the A75 Series 2 and the tape or cassette recorder to be used.
Record signal at pins 1 and 4 of tape socket 180 Millivolts (assuming rated input signals).

Minimum input loading presented by the recorder 50 Kilohms per channel.

Replay signal required from recorder to fully load the A75 Series 2 amplifier 180 Millivolts.

Loading presented by the A75 Series 2 amplifier on the recorder replay signal 75-100 Kilohms per channel.

7e. Cassette Socket

The 5-pin DIN cassette socket located on the back chassis panel of the amplifier is designed for direct connection of a cassette recorder, utilising a 5-pin din connecting lead. The record signal level at this socket has been so arranged as to be suitable for a wide variety of cassette recorders avoiding the overloading problem so often encountered when trying to record onto a cassette machine.

Provision is made for the recording and playback of signal sources from disc and tuner and the transfer of tape recordings from a second recorder (open reel or cassette) plugged into the tape sockets and visa versa.

There is no tape monitoring facility available when using this socket and if a recorder with separate record and replay heads is used and this facility is required then the tape sockets should be used (see tape sockets).

Important

There are considerable differences when recording and playing back through the cassette socket to those already described when using the tape sockets. Therefore the following should be thoroughly understood before attempting to record using this socket.

The cassette record signal is unaffected by the operation of the bass, treble, filter, balance or volume control but IS affected by the operation of the TAPE MONITOR BUTTON. To record from tuner or disc the TAPE MONITOR BUTTON must be OUT.

To record from another recorder connected to the TAPE socket the TAPE MONITOR BUTTON must be IN.

To replay from the cassette recorder the CASSETTE button must be IN and the tape monitor button must be OUT.

A useful rule to remember is that any signal that is heard through the loudspeakers connected to the A75 Series 2 amplifier will be available for recording onto a cassette recorder plugged into a cassette socket.

The following technical information relating to the cassette socket will be required by your dealer to check that your present or intended cassette recorder is included in the wide range of acceptable units that can be directly plugged into the cassette socket.

Record Signals:

180 Millivolts in series with 330K ohm resistors at pins 1 and 4. The signal level available will vary with the input impedance of the cassette recorder as indicated in the graph. The signal is intended for cassette DIN inputs up to 30 Kilohms input impedance, to preserve high

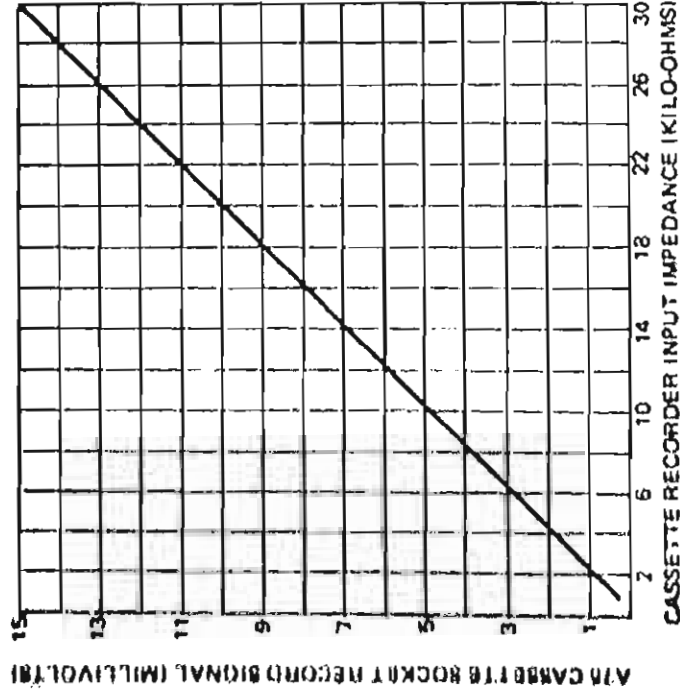
frequency response against the capacity of the connecting cable which should be limited to approx. 100pf (i.e. about 2ft. Long).

Replay Signal

180 Millivolts to fully load the A75 Series 2 Amplifier. Cassette recorders giving much larger outputs will cause low settings of the amplifier volume control and may in extreme cases need attenuating (see section 8bii on volume control).

The wiring of the cassette socket conforms to the DIN standard as follows:—

- | | |
|------------------------|-----------------------|
| 1. Record Left Output | 5. Replay Right Input |
| 4. Record Right Output | 3. Replay Left Input |
| 2. Signal Earth | |



8. Controls and their Functions

8a. Power ON/OFF

A rotary action switch integral with the "VOLUME" control applies the mains power to the amplifier and the A.C. Outlet sockets with a red light emitting diode (LED) located at the bottom right hand corner of the front panel acting as a visual indicator.

8b. Volume

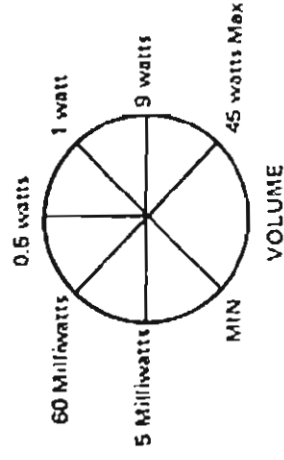
A close tolerance dual potentiometer controls the amplifier output and loudspeaker volume from all input signals but has no effect on the level of recording signals available at the tape or cassette sockets.

The logarithmic law of the volume control provides a more gradual increase in sound level as the control is advanced.

There are two important points to note regarding the action of this control.

- i. When the correct level of input signal is applied the mid point (12 o'clock) setting does not correspond to the half power output of the amplifier, the diagram below gives an indication of the power available into an 8 ohm loudspeaker for various positions of the volume control.

- ii. When the input signal is considerable in excess of the rated input level stated in the technical specification, the volume control will, for normal listening levels, be operating at a very low setting of its rotation. Imbalance between channels may result, needing correction applied by the BALANCE control. This condition is mostly associated with the replay from cassette and tape recorders.



8c. Input Selector

The first three buttons provide for the selection of disc, cassette and tuner inputs. Depressing the required button automatically releases either of the other two buttons previously depressed.

To release all three buttons (REQUIRED for tape 'Dubbing') half depress either of the buttons not already depressed this will release the third button.

The mono left and the mono right buttons work independently and with both buttons out normal stereo operation will be obtained. (see schematic diagram 1.) With mono L or mono R buttons depressed a signal fed into either the left or right inputs of the tuner, cassette, disc or tape sockets respectively will appear at both loudspeakers, see schematic diagrams 4, 5 and 7 to obtain more information.

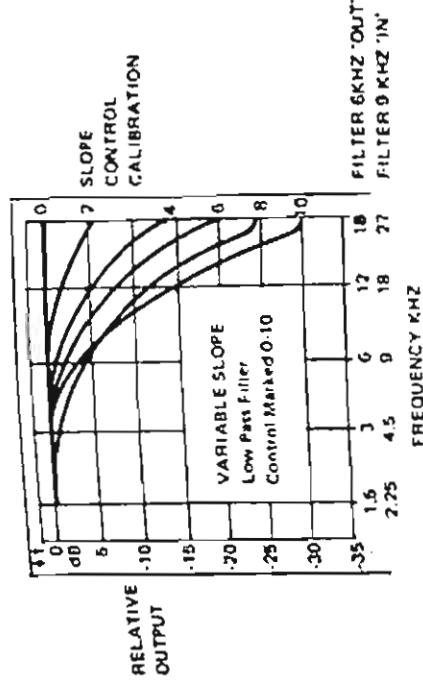
On the disc input only the mono L button has an additional function (see disc mono records) and schematic diagram 5.

8d. Tape Monitor

The tape monitor button when depressed disconnects all input signals from the amplifier allowing the replay of tape recordings via the tape sockets. For further details see section on "Tape Socket" and refer to schematic diagrams 2, 3, 6 and 8

8e. Filter and Slope Control

A two position filter switch operates at frequencies of 6 KHz and 9 KHz and with a continuously variable slope control provides comprehensive facilities for reducing the high frequency distortions and noise so often encountered from records tape and radio sources, whilst retaining maximum programme content. The filters can be used in conjunction with the treble control for obtaining the best results from more difficult programme material which may need frequency correction different to that obtained from the individual filter and treble controls. (see section on bass and treble). The filter and slope controls do not in any way affect the record signals available at the tape or cassette sockets.

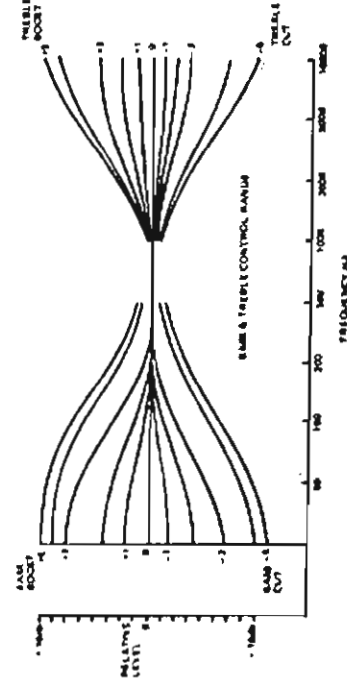


With the slope control set fully anti-clockwise at 0 the filter is out of circuit. Rotating the slope control in a clockwise direction from 0 — 10 will produce a varying high frequency response shape as shown in the diagram above. For severe cases of distortion or noise the filter button should be set at 6KHz and the slope control set at maximum (10).

For severe harshness and sibilants etc, the filter should be set at 6KHz and the slope control advanced only as far as necessary to reduce the offending sound.

On many top quality programmes from disc, tape or radio, a small amount of high frequency filtering is often required and in this case the filter should be first tried at 9KHz and the slope control advanced until any slight imperfections are filtered out.

Note: Advancing the slope control from 0 — 10 on a high quality programme source with the filter set to 9KHz may not produce any perceptible difference in sound quality to many people, (this usually is due to a hearing limitation on the part of the listener and not a failure of the filter control).



8f. Bass & Treble Controls.

The optimum setting for the bass and treble controls will depend on programme material, room acoustics and personal taste. It is therefore impossible to give recommended settings and a start should be made with both controls at the centre zero position.

A lack of BASS or TREBLE can be corrected by adjusting the required control to a position between 0 and + 5 and similarly an excess of Bass or Treble can be corrected by adjusting the required control to a position between 0 and —5.

Caution

Applying a large degree of bass and treble boost at high volume levels should be avoided as this can lead to severe overloading of the power amplifier and the consequent blowing of the internally fitted transistor protection fuses.

8g. Combined Use of Treble Filter Controls

The treble control can be used in conjunction with the filter and slope control to provide a combined response curve which may be found more useful than using either the treble or filter controls alone. One such application is in the playing of old 78 r.p.m. records, where with the filter set to 6KHz and the slope control at maximum some additional treble cut is applied from the treble control.

8h. Balance Control

The balance control is to compensate for the unequal level of signals likely to be encountered between left and right channel programme sources, sensitivity variations between loudspeakers, the unequal placement of the loudspeakers in the listening room etc. This control has no effect on the tape or cassette record signals. In its centre zero position equal amplification is applied to each channel. Rotating the control in an anti-clockwise direction from 0 to 5L reduces the right hand channel output thus altering the balance in favour of the left hand channel and rotating the control clockwise from 0 to 5R reduces the left hand channel output thus altering the balance in favour of the right hand channel.

The range of control is 9db and position 1 corrects for an imbalance of 0.5db, position 2, 1.25db, and position 3, 4db up to a maximum at position 5.

9. Recording and Playback utilising the Cassette Socket

9a. Recording from Disc or Tuner

- Depress disc or tuner button as required.
- Set tape monitor button to OUT.
- Proceed to record.
- It is possible to listen, through the A75 Series 2 Amplifier, via headphones or loudspeakers, to the signal being recorded, adjusting bass, treble, volume, balance or filter controls as required without affecting in any way the programme being recorded.

Series 2 Amplifier, via headphones or loudspeakers, to the signal being recorded, adjusting bass, treble, volume, balance or filter controls as required without affecting in any way the programme being recorded.

9b. Recording (Dubbing) from another tape or cassette recorder plugged into the tape socket

- Set the disc, tuner and cassette buttons to 'OUT'.
- Depress tape monitor button to 'IN'.
- Proceed to record from the recorder plugged into the tape socket onto the cassette recorder.
- It is possible to listen through the A75 Series 2 Amplifier, via headphones or loudspeakers to the signal being recorded, adjusting bass, treble, volume, balance or filter controls, as required without affecting in any way the programme being recorded.

9c. Replay from Cassette

- Depress cassette button to 'IN'.
- Set tape monitor button to 'OUT'.
- Listen to a previously recorded tape through the amplifier and loudspeakers or headphones.

10. Recording and Playback utilising the Tape Socket

10a Recording from disc, tuner or DUBBING from a cassette recorder:—

- Depress disc, tuner or cassette button as required.
- Proceed to record.
Set tape monitor button to 'OUT' to listen to the programme being recorded
Set tape monitor button to 'IN' to monitor the recording being made.

Note: This can only be achieved with recorders having a separate record and replay head.

If the tape monitor button is depressed when using a recorder with a combined record/replay head then any signal heard

in the loudspeakers must be the signal that is being recorded.

10b Replay

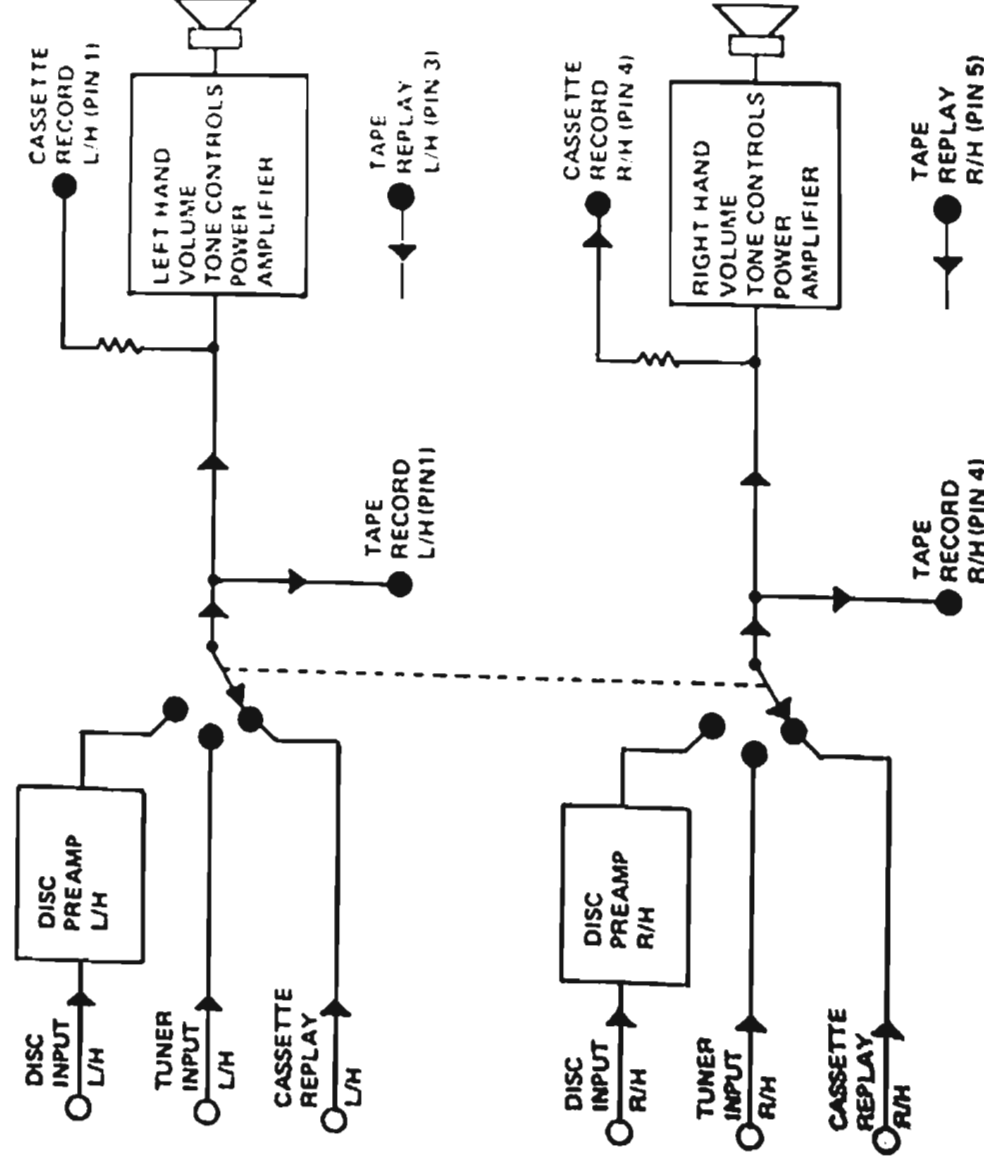
Depress tape monitor button to listen to a previously recorded tape through amplifier and loudspeakers or headphones.

11. Tape Recorder Compatibility, when Dubbing

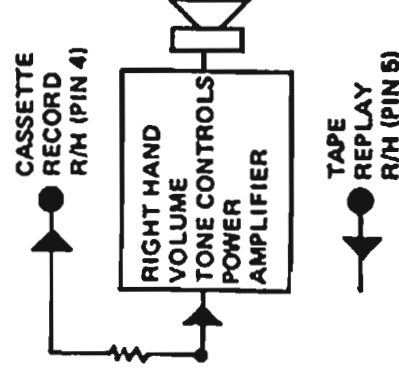
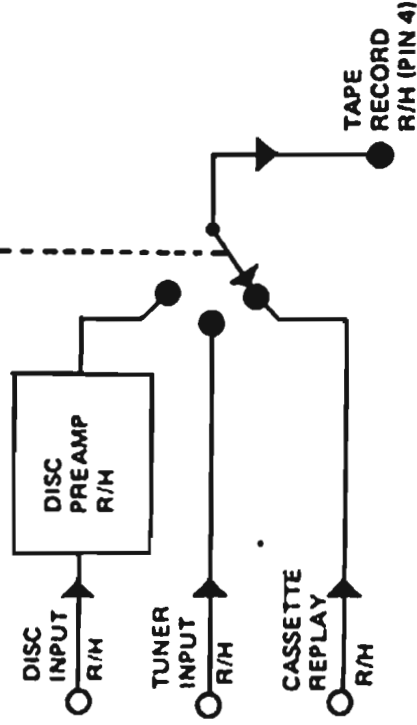
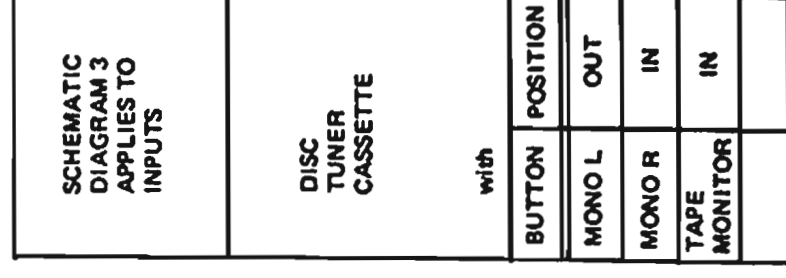
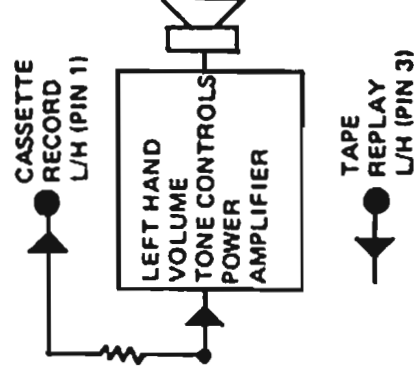
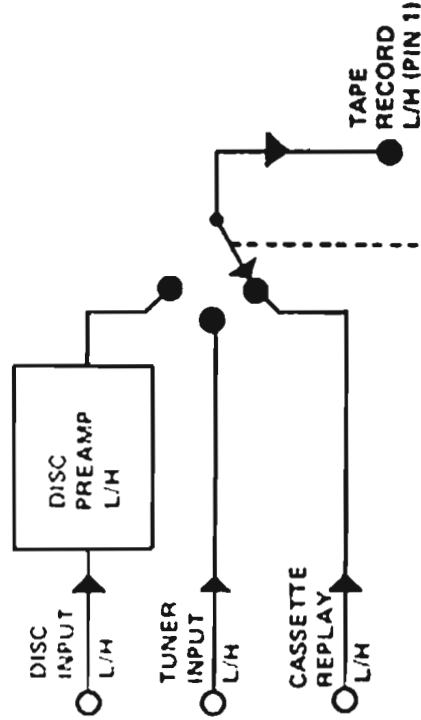
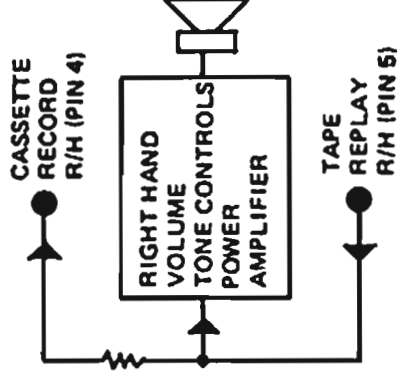
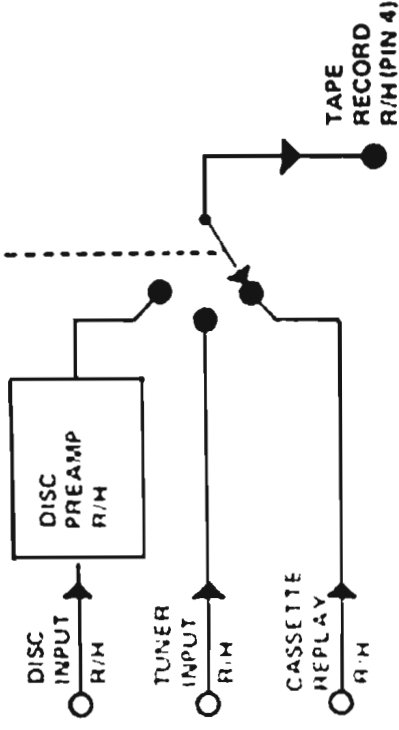
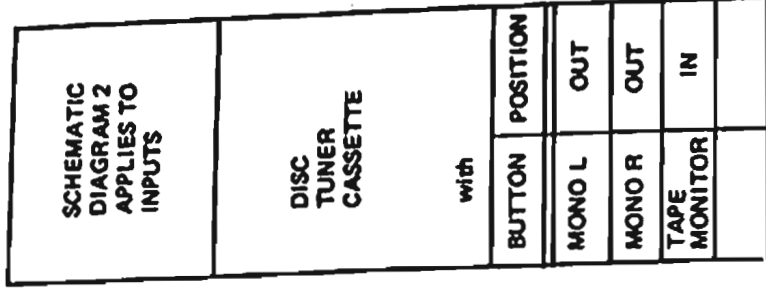
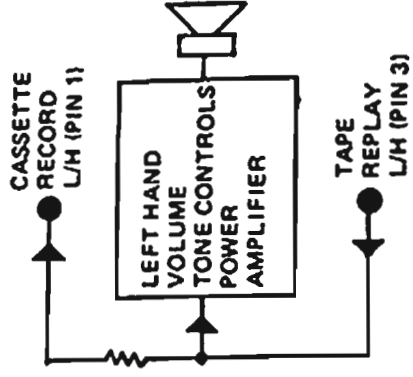
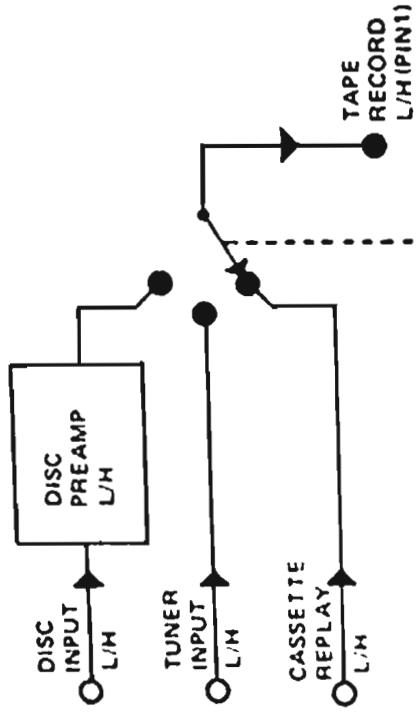
The compatibility between the A75 Series 2 amplifier and recorders plugged into the tape or cassette sockets has already been mentioned under the appropriate headings. The compatibility between recorders plugged into the tape and cassette sockets for the express purpose of transferring recordings from one recorder to the other cannot be covered in these instructions, as it will depend on machine to machine matching.

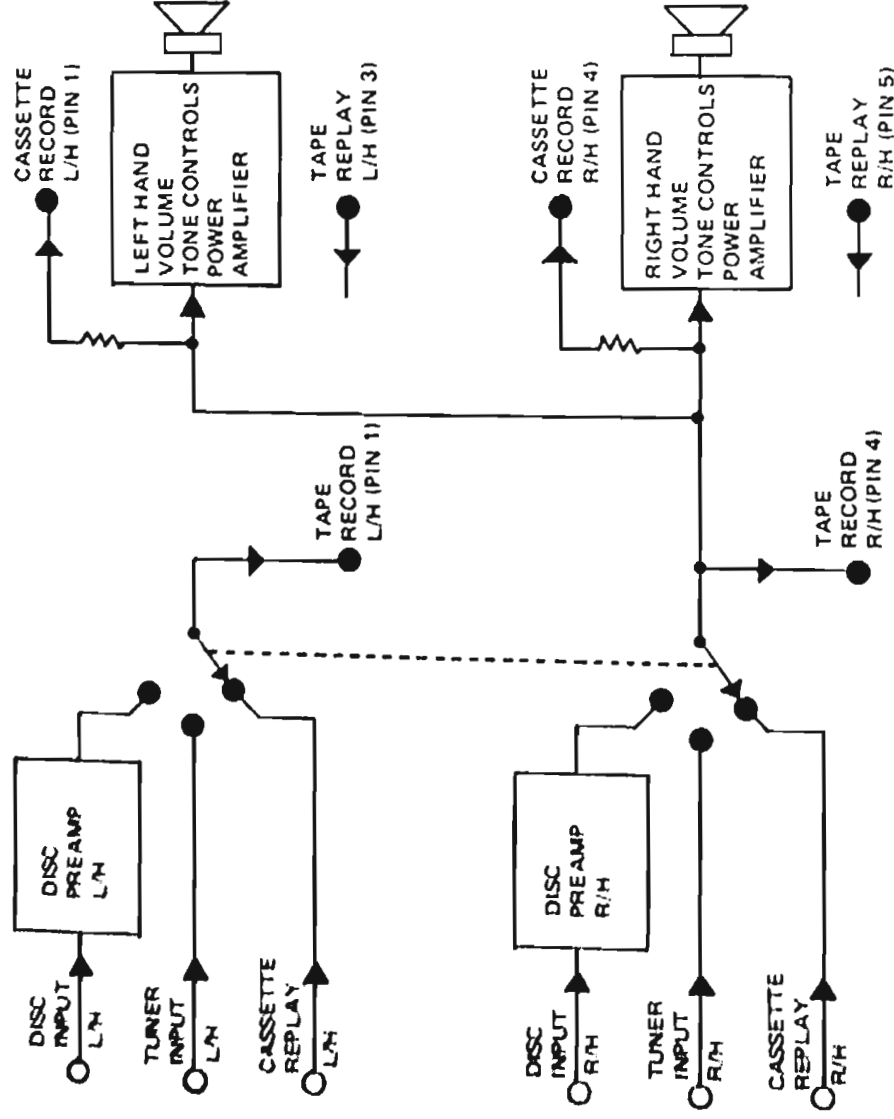
The A75 Series 2 only directs signals from one recorder to another. It does not amplify attenuate or match between recorders in any way, (see schematic diagram No: 9).

DIAGRAMS

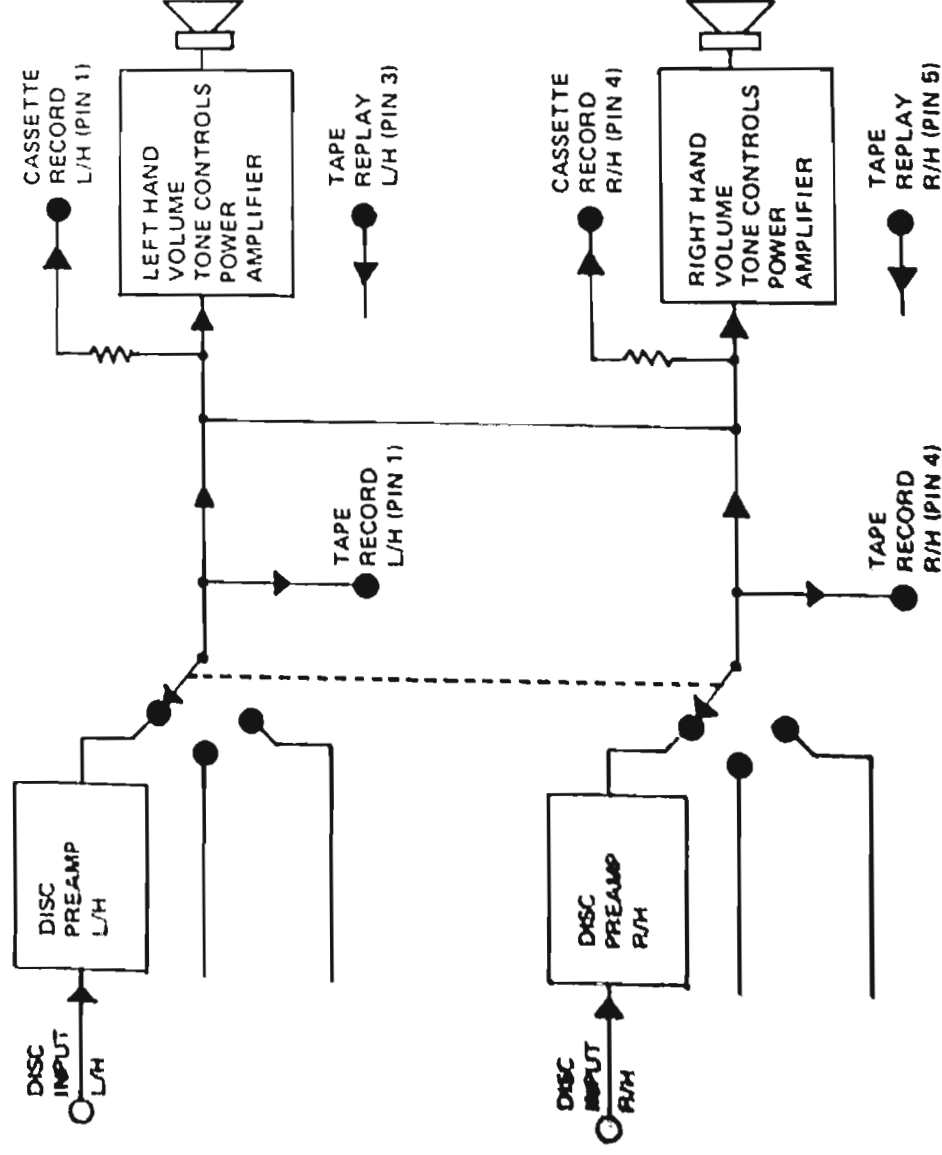


SCHEMATIC DIAGRAM 1 APPLIES TO INPUTS	
DISC TUNER CASSETTE	
with	
RUTTON	POSITION
MONO L	OUT
MONO R	OUT
TAPE MONITOR	OUT

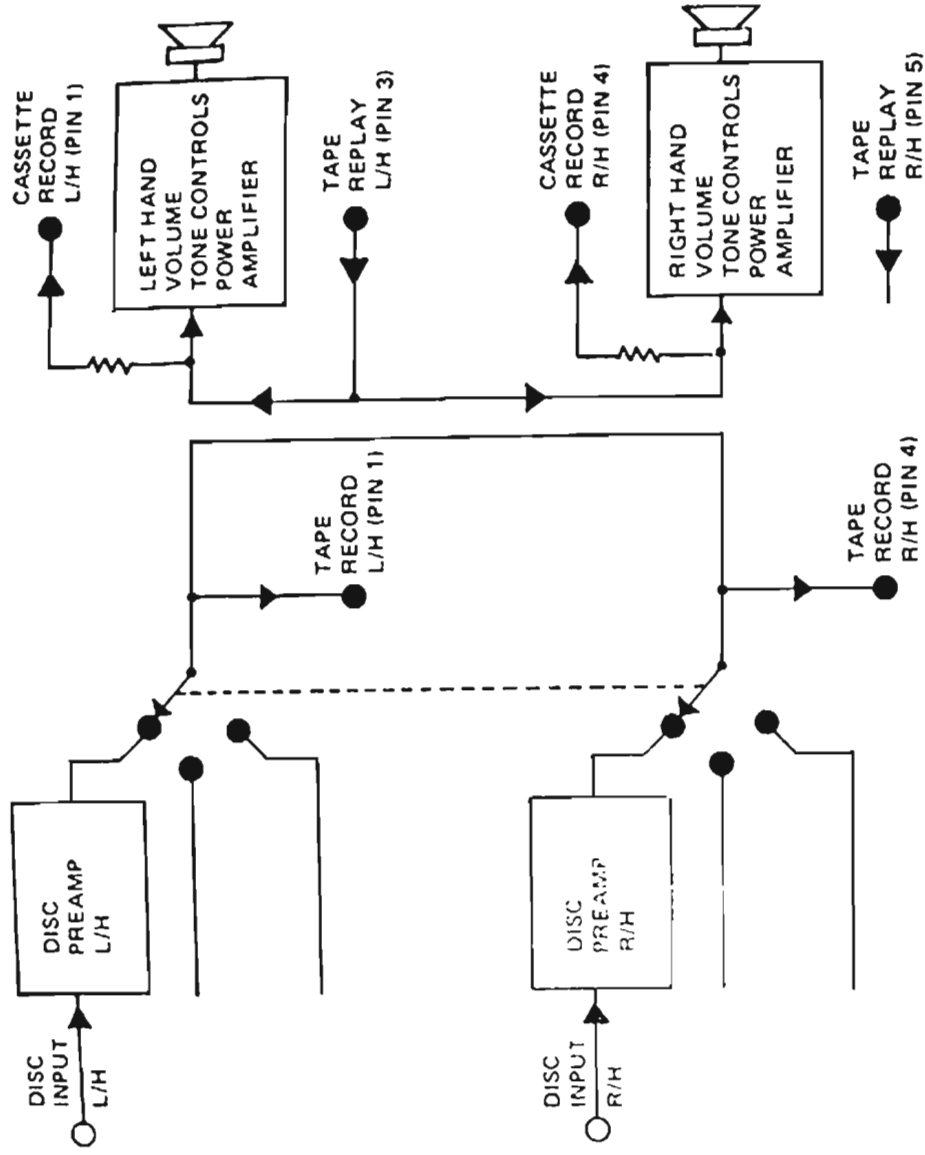




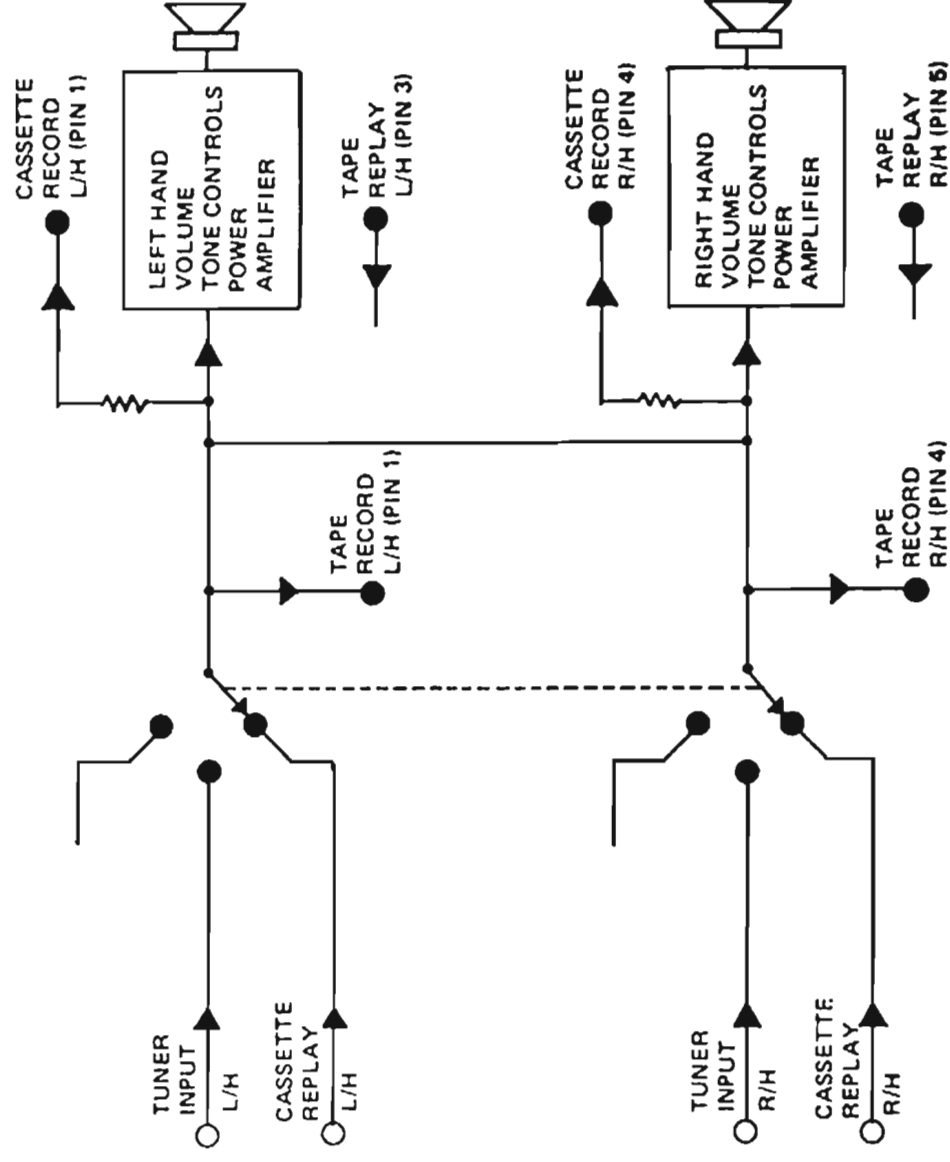
SCHEMATIC DIAGRAM 4 APPLIES TO INPUTS	
DISC TUNER CASSETTE	
with	POSITION
BUTTON	MONO L
	OUT
	MONO R
	IN
	TAPE
	MONITOR
	OUT



SCHEMATIC DIAGRAM 5 APPLIES TO INPUTS	
DISC	
with	POSITION
BUTTON	MONO L
	IN
	MONO R
	OUT
	TAPE
	MONITOR
	OUT



SCHEMATIC DIAGRAM 6 APPLIES TO INPUTS	
DISC	
with	
BUTTON	POSITION
MONO L	IN
MONO R	OUT
TAPE MONITOR	IN



SCHEMATIC DIAGRAM 7 APPLIES TO INPUTS	
TUNER CASSETTE	
with	
BUTTON	POSITION
MONO L	IN
MONO R	OUT
TAPE MONITOR	OUT

Technical Specification

Input Facilities

Selected by front push buttons.
Sensitivities are for 45 watts into 8 ohms
Disc (Magnetic or Ceramic)

Input impedance: 47K ohms
Input connection: 5 pin DIN socket on rear panel

Response: Equalised to R.I.A.A. \pm 1db
Sensitivity: 2.7mV, 4mV, 5.6mV and 8.2mV at 1 KHz (Selected by rear panel push buttons)
Overload: better than 80 mV at 1 KHz on the 2.7 mV sensitivity position.

Note 1: Ceramic pickups can be used feeding into low impedance R.I.A.A. Equalised inputs and some manufacturers specify additional correction networks for such applications.

Note 2: See Mode Selection for playing Mono records with a stereo pickup.

Tuner

Sensitivity: 180mV
Input Impedance: 100K ohms in stereo mode
Overload: Infinite for all practical applications

Cassette

Replay Sensitivity: 180 mV
Input Impedance: 100K ohms in stereo mode
Overload: Infinite for all practical applications

Tape

Replay Sensitivity: 180 mV
Input Impedance: 100K ohms in stereo mode
Overload: Infinite for all practical applications
Input Connection: 5 pin DIN standard socket on rear panel and duplicated on front panel.

Output Facilities

Signal levels for rated inputs

Cassette Record

Record level: 180mV in series with 330 K ohms suitable for most DIN Standard inputs
Output Connection: 5 Pin DIN socket on rear panel

Tape Record

Record level: 180mV
Load Impedance: 50K ohms or greater
Output connections: 5 Pin DIN standard socket on rear panel and duplicated on front panel.

Power

3 Switched A.C. Power Outlets. (Total Maximum Permitted Load 240 watts)

Phones

Standard $\frac{1}{4}$ " stereo jack socket on front panel
Maximum level: 20 Volts in series with 150 ohms (suitable for most headphones of 8-600 ohms impedance).

Speakers

Connection: Single pole sockets to accommodate heavy duty 4mm low contact resistance plugs.

Selection by front panel control of two individual sets of stereo loudspeakers A or B. With additional facility of selecting A and B simultaneously and of switching off all loudspeakers while retaining headphone output.

Tone and Volume Controls

Bass Rotary control allowing up to 16 db boost or cut at 30 Hz

Treble

Rotary control allowing up to 16 db boost or cut at 10 KHz

Volume

Rotary logarithmic control to allow smooth increase in output level.

Filters

HIGH PASS Fixed at 20 Hz with a slope of approximately 30 db per octave
LOW PASS Two position variable slope filter with a 6 KHz or 9 KHz turnover frequency selected by a front panel push button with the slope being continuously variable between zero and 20 db per octave by a rotary front panel control
All dual controls are close tolerance potentiometers to allow accurate tracking between left and right hand channels.

Mode Selection Left and Right

Front panel push buttons give the following facilities on Radio, Cassette and tape inputs: Left and right inputs to left and right outputs for stereo operation.

Left input applied to left and right outputs
Right input applied to left and right outputs
Selection of a single track on a $\frac{1}{2}$ or $\frac{1}{4}$ track open reel recorder for playing back on both amplifier channels can be achieved using Mono left or Mono right input buttons.

Stereo or Mono

Front panel push button allows the left and right disc inputs to be connected in parallel and applied to both amplifier channels. (For use with stereo pickups playing mono records).

Cassette — Open Reel Recorders

Facilities include:

Recording from disc, radio or cassette on to an open reel recorder.

Recording from disc, radio or open reel recorder on to a cassette recorder.

Replay from a cassette recorder.

Replay from a 3 head open reel recorder with tape monitoring button allowing A/B comparison between the original signal being recorded and the recorded signal

Performance

Output Configuration

Class AB employing D.C. Loudspeaker coupling using Darlington linear high gain output devices and a unique drive circuit configuration

Output Power

Continuous Sine Waves:

45 + 45 watts into 8 ohms

30 Hz — 30 KHz Both Channels driven

36 + 36 watts into 4 ohms

30 Hz — 30 KHz Both channels driven

28 + 28 watts into 15 ohms

30 Hz — 30 KHz Both channels driven

Power Band Width

0db = 45 watts into 8 ohms

— 3dB at 20 Hz and 50KHz

Total Harmonic Distortion (both channels driven)

Less than 0.08% at 1 KHz at any power up to 40 watts into 8 ohms load

Less than 0.3% 40 Hz — 20 KHz at any power up to 40 watts into 8 ohm load.

Damping Factor

30 at 50 Hz ref 10 watts into 8 ohms

Balance Control

9 db range

Signal to Noise

Disc: better than 70 db (CCIR weighting).
All other inputs: better than — 80 db (CCIR weighting).

Frequency Response

Disc: R.I.A.A. Equalisation \pm 1db

All other inputs: \pm 1db 25 Hz — 20 KHz

\pm 2db 20Hz — 50KHz

Stereo Separation

Better than 52 db at 1 KHz with disc input at maximum sensitivity, and Output level of 45 watts into 8 ohm load.

Power Supply

Balanced positive and negative supply rails employing capacitor smoothing and fast acting fuses for unobtrusive operation with complete amplifier and loudspeaker protection.

Range (Set internally)

110/120/220/240v 50-60 Hz A.C. Mains

Consumption

Maximum output: 200 watts

Transistor Complement

14 silicon small signal Transistors

4 silicon power driver Transistors

4 silicon Darlington output devices

Dimensions

38.2 cm x 28.6 cm x 11.7 cm
(14 $\frac{1}{2}$ " x 11 $\frac{1}{4}$ " x 4 $\frac{1}{2}$ ")

Weight

7 kg (15 $\frac{1}{2}$ lbs)

The Manufacturers reserve the right to alter specifications without prior notice

14. Troubleshooting

If the A75 Series 2 amplifier is not working correctly check through the simple problems that can arise in the table below, before returning the unit or ringing for service.

Amplifier completely dead and indicator does not light.

Check that the power is switched on.
Check the mains fuse is intact and securely fitted in fuse holder especially if equipment plugged into the A.C. outlet sockets functions.

No Output from loudspeaker for any input.

Check speaker connections and see that speaker switch is set to corresponding 'a' or 'b' positions.

No sound output on Disc Radio or cassette replay.
Check the tape monitor button is set to the 'out' position.

Distorted Output on Disc only.

Check tracking weight of pick-up, check for dirty or damaged stylus.

Weak Output on Disc only.

Check that the Disc sensitivity buttons are correctly set for the pick-up cartridge being used.

Distorted Output on FM Radio.

Check the aerial connections and investigate the position and siting of the aerial.

Weak Output on FM Radio.

When the Rogers T75 Series 2 tuner is used check that its 'output control' is set to maximum.

Guarantee

15.

The unit is guaranteed against any defect in material or workmanship for a period of twelve months from the date of purchase.

Within this period we undertake to supply replacements free of charge for any parts which may prove on examination to be defective provided that such defectiveness is not the result of misuse (including use with unsuitable ancillary equipment), accident or negligence.

Any unit requiring service under this guarantee should be taken to the supplier through whom it was purchased, or, in the case of difficulty, it should be carefully packed and consigned,

carriage paid, to the main distributor for the country of purchase quoting the date and place of purchase. It must not be sent to any other agent or distributor except by special arrangement. Please retain original packing for this purpose.

This guarantee is valid only when these conditions are complied with and does not cover carriage costs involved in any repair under the guarantee.

Our terms of guarantee do not require return of a registration card but proof of purchase (e.g. Sales Invoice) should be retained for inspection if required.