

SUGDEN

A48III
INTEGRATED
STEREO
AMPLIFIER

INSTRUCTION BOOK

Your Sugden Amplifier is individually constructed from carefully selected materials and components.

With normal use and a little care, it will bring you many years of sound enjoyment.

To obtain the best from the Amplifier's many features, please read this booklet carefully and if you have any queries, your dealer will be only too pleased to advise.

J. E. SUGDEN & CO LTD

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STATION LANE
HECKMONDWIKE
WEST YORKSHIRE WF16 0NF

UNPACKING

Your amplifier should reach you in a substantive, protective carton. On unpacking, please examine the unit carefully for signs of damage or prior use. Check that all the front panel controls function mechanically.

The following items should also be in the carton:-

- a) 4 loudspeaker plugs – 2 reds 2 black
- b) 2 spare gold plated header links
- c) 1 pre-paid owner's Registration Card, the lower half of which should be completed and returned to ourselves.

May we suggest that you retain the protective carton in the unlikely event of the Amplifier having to be returned to ourselves.

INSTALLATION

This is a class A/AB Amplifier and, therefore, the heatsinks will become quite warm when the Amplifier is in operation. A free air-flow around the heatsinks is essential if the Amplifier is not to overheat.

Do not site the Amplifier in direct sunlight.
Do not box in unless adequate ventilation is provided.
Do not cover the heatsink.

CONNECTING TO THE MAINS SUPPLY

Please check that the voltage rating on the back of the Amplifier is correct for your supply. Connection to the mains varies for the country for which the amplifier is supplied. In some countries the mains lead is terminated with a captive moulded mains plug. These plugs will be two or three pin plugs to suit local conditions and regulations.

Where the mains cable is not terminated with a captive mains plug these must be correctly connected to a two or three pin plug to ensure complete safety.
The mains cable is colour coded as follows:-

3 PIN	BROWN BLUE GREEN/YELLOW	LIVE NEUTRAL EARTH
2 PIN	BROWN OR BLACK BLUE	LIVE NEUTRAL

It is essential that the above colour codes are observed and that the voltage and frequency of supply conforms to the markings on the amplifier.

OUTPUT CONNECTIONS

LOUDSPEAKERS

The loudspeaker connections are via the red and black binding posts at the right-hand rear of the Amplifier. These binding posts will accept spade connectors soldered bare wire and in some countries 4mm jack plugs.

Connection of the loudspeaker leads to the plugs is made by soldering and care should be taken to ensure that the connection is properly made i.e., no loose strands or dry joints. The use of special interwoven or co-axial cables is not recommended.

The outputs are suitable for driving most types of loudspeaker of 8 ohms nominal impedance or greater.

SIGNAL INPUT CONNECTIONS

All input connections are via standard phono sockets on the rear left of the Amplifier.

The majority of signal source equipment is provided with leads terminating in phono plugs, but if interconnection difficulties are experienced your dealer can advise.

INPUTS FROM ANCILLARY EQUIPMENT – EARTHING

One of the most common problems with high performance audio equipment is an audible hum through the loudspeakers.

This can frequently be traced to the connections of ancillary equipment which is separately earthed via its own mains supply causing a “hum-loop”.

Whilst we cannot recommend that earth connections be moved from ancillary equipment power plugs, it may be the only solution in order to remove the “hum loop”.

Ancillary equipment is, however, earthed via its input lead screen, through the Amplifier **but only whilst the ancillary equipment remains connected to the Amplifier.**

Should you remove the earth connections in ancillary equipment mains plugs, remember:-

- 1) LEAVE THE EQUIPMENT PERMANENTLY CONNECTED TO THE AMPLIFIER INPUTS. IF THE EQUIPMENT IS TO BE REMOVED FOR ANOTHER USE, IT MUST BE UNPLUGGED FROM THE MAINS POWER **BEFORE** REMOVING THE PHONO INPUTS.
- 2) REMEMBER TO RE-CONNECT THE EARTH WIRE IN THE POWER PLUG.

- 3) UNDER NO CIRCUMSTANCES SHOULD THE EARTH CONNECTION IN THE AMPLIFIER BE REMOVED AT ANY TIME.

PHONO INPUTS – EARTHING

Many record decks and tone arms are provided with separate earth wire connections in conjunction with the phono input leads. This should be connected to the functional earth screw terminal on the Amplifier which is located at the rear left-hand side, adjacent to the input sockets.

PHONO INPUT

The disc input circuit is designed to accept moving magnet or moving coil input signals with the minimum of adjustment. When the unit leaves the factory it is set up in a mode to suit moving magnet cartridge input.

To change the amplifier from M.M. to M.C. or vice versa reference should be made to the rear of this manual. This will give instructions on gaining access to the inside of the amplifier and the relevant position of small header units to alter the gain of the phono stage. It is quite a simple task, there is no soldering required, or component changes. If you have any problem please consult your dealer or the factory for advice.

The loading and sensitivity of the two types of input are stated at the end of the booklet. The components and loadings have been chosen to meet the majority of cartridges on the market. If you have a specific cartridge which has abnormal requirements or changes from the standard supplied we shall be pleased to advise you on your requirements.

CD INPUT

The C.D. Input is tailored to be suitable for most C.D. players.

TUNER INPUT

The Tuner input is suitable for most good quality FM and AM Tuners with output levels of up to 500mV. Input impedance is 180 K ohms.

AUXILIARY INPUTS 1 & 2

The input impedance and level requirement for this input are identical to that of both Tuner and Tape input. It will, therefore, lend itself to use with either an additional Tuner or second Tape Deck.

TAPE INPUT

The Tape input is designed to suit most reel, and Cassette Recorders and via the 'Tape' monitor button on the front panel, post tape monitoring on 3 head machines, can be achieved.

Input impedance is 180 K.

TAPE OUTPUT

The outputs for recording can be taken from either DISC, C.D., TUNER or AUX, depending upon which is selected. Please note that the Amplifier controls (excepting the input selection switches) do not affect any of the recording signals.

PRE-AMP OUTPUT

The pre-amp phono sockets can be used for three different functions.

1. To use the amplifiers pre-amp section to serve a separate power amplifier.
2. To drive an active sub woofer preferably one which includes an attenuator (level control device).
3. When the amplifier has been switched to operate in MONO/BRIDGED MODE (SEE UNDER MONO/BRIDGED HEADING).

MONO/BRIDGED OPERATION

The A48III integrated amplifier is provided with an internal bridge switch. The amplifier is dispatched from the factory with this switch in the stereo position as a standard stereo integrated amplifier.

The amplifier can be converted to a mono amplifier by moving the switch to the bridged position (see later illustration). When the switch is in the bridged position the output signal appears across the two red (positive) speaker terminals. This is a double amplitude signal, being the sum of the two output channels. The signal appearing is the left hand channel signal which is passed directly through the LHC power amplifier stage and inverted and passed through the RHC power amplifier stage.

The right hand channel signal is directed to the pre-amp out phono socket. This signal can be used to feed a bridged version of the SUGDEN P28 which will then form the RHC of a dual mono stereo amplifier system. To preserve correct phasing the bridged amplifiers must be connected as illustrated later in the Instruction Manual.

It is imperative that neither red sockets are connected to earth or damage could ensue. See rear of booklet for bridge mode diagram of A48III/P28

FRONT PANEL CONTROLS

INPUT SELECTION

The rotary selector switch located on the left of the front panel selects the relevant input signal i.e. PHONO, C.D., AUX1, AUX2 and is associated with the signal input/output sockets on the rear panel.

PHONO

This will allow the signal from a Record Deck connected to the Disc inputs to be played through the amplifier to the loudspeakers.

The signal will also appear at the Tape out sockets for recording purposes.

C.D.

As above.

TUNER

As above.

AUX 1 & 2

As above.

TAPE

This is a push button control that can be used for two purposes.

- 1) TAPE PLAYBACK: The playback of recorded tapes is enabled by pushing in the tape push button. This overrides all other input signals.
- 2) MONITOR On three head machines with the push button pressed in as above and whilst recording, monitoring of the post tape signal can be achieved i.e. Monitoring of the Phono, Tuner etc. which you wish to record can be listened to. Selection:- PHONO – on main selector “Tape push button in” will give you monitoring of the phono signal recorded.

VOLUME

The volume control continuously adjusts the power delivered to the loudspeakers and hence the listening level. Minimum output is in the fully anti-clockwise position with the pointer at ‘6 o’clock’. Attenuation in this position is -90 dB with an initial step of -60 dB. Interchannel matching is better than ± 1 dB at all levels.

BALANCE

The balance control will move the stereo image left or right depending upon the setting. This is a discreet change of approximately 5 dB channel to channel. Equal channel balance is in the central detent position.

MONO

This button will mix both left and right stereo inputs applying the resulting signal equally to both halves of the Amplifier.

MUTE

This button when pressed cuts off the signal completely.

PHONES

The A48 is capable of driving most headphones from 4 to 2000 ohms impedance via the headphone jack socket. The headphone socket is fitted to the front panel of the Amplifier and is activated at all times.

LOUDSPEAKER OUTPUTS

As mentioned previously these are two red and two black binding posts. The output circuit for the loudspeakers contains a speaker push button switch. To activate the loudspeaker outputs the switch (located on the rear panel on the right-hand side) must be “pressed in”.

This switch is a useful aid if comparisons of speakers are to be carried out. By releasing this switch the amplifier is disconnected from the outputs and the speakers can be connected or disconnected without risk to the unit even when the Amplifier itself is switched on.

POWER

Pressing the power button will turn the Amplifier on or off, at the same time illuminating the power on L.E.D.

FUSES

Should a fuse blow, this is usually an indication of a fault of some form. It is essential that the fault be located and corrected before any new fuse is inserted. If you are in any doubt, please consult with your dealer or the factory.

LOUDSPEAKER FUSES

These are 2 fast blow fuses 20mm x 5mm dia. Marked with their correct value. They must only be replaced with a fuse of identical type. It is possible for these fuses to blow under prolonged high level music conditions and they will also blow if loudspeaker leads are short circuited.

If, after replacing a fuse, the new one blows immediately after turn on, do not attempt further replacements. Please seek advice from your dealer or the factory.

MAINS POWER FUSE

This is a 20mm x 5mm dia slow blow fuse of 1 amp rating for 220/240V and 2 amp rating for 110/120V and **must only be replaced with a fuse of the correct type.**

MAINS VOLTAGE RATING

The mains voltage for which your Amplifier is set is shown on the rating label of your Amplifier.

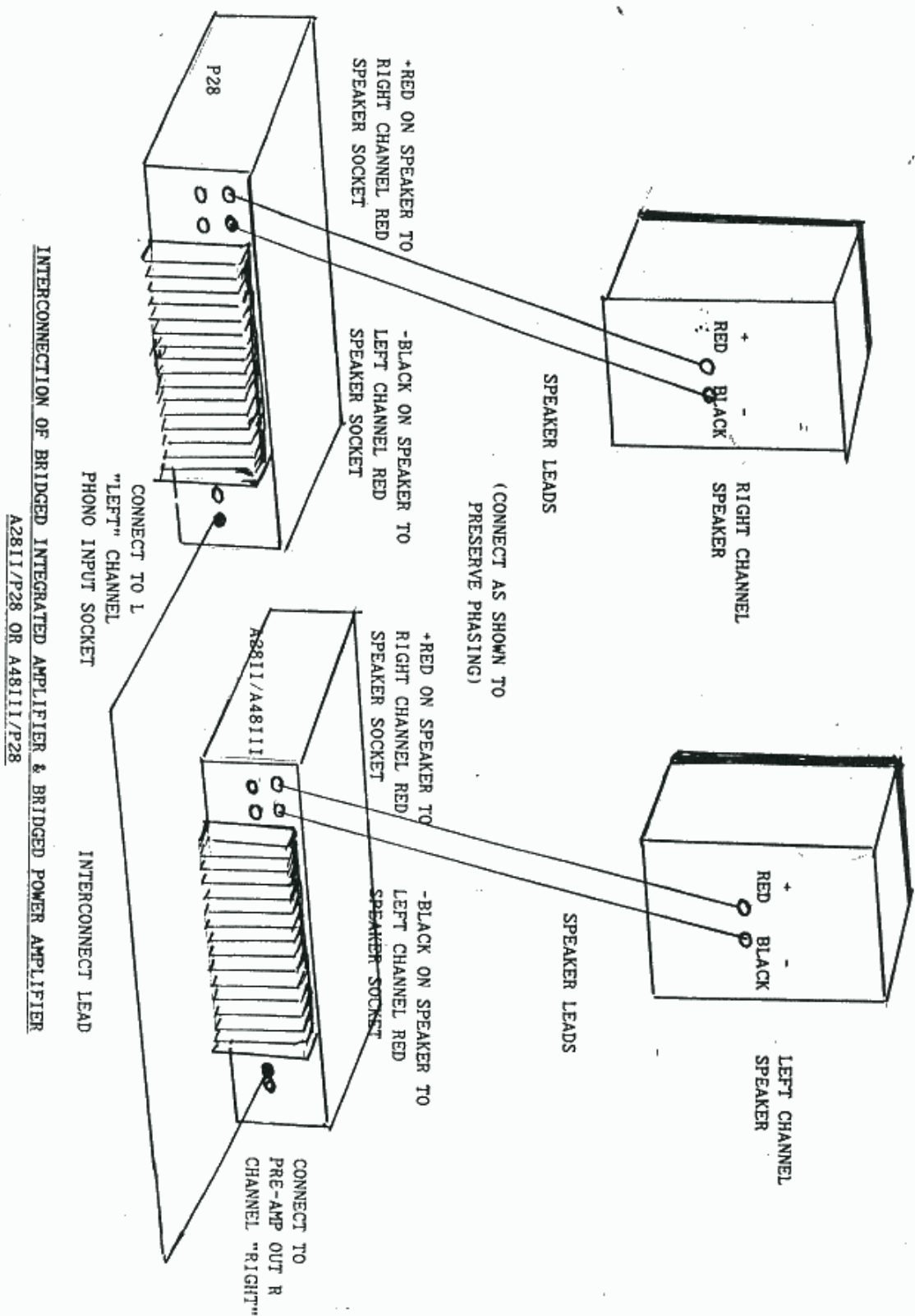
Whilst a 240 V set Amplifier will operate over the range 210/240 V 50/Hz without alteration, only by altering the transformerappings can full output power be achieved.

It is **not permissible** to operate a lower voltage set Amplifier on a higher mains output voltage – eg: **DO NOT** operate 220V Amplifiers on 240V.

ACCESS TO AMPLIFIER

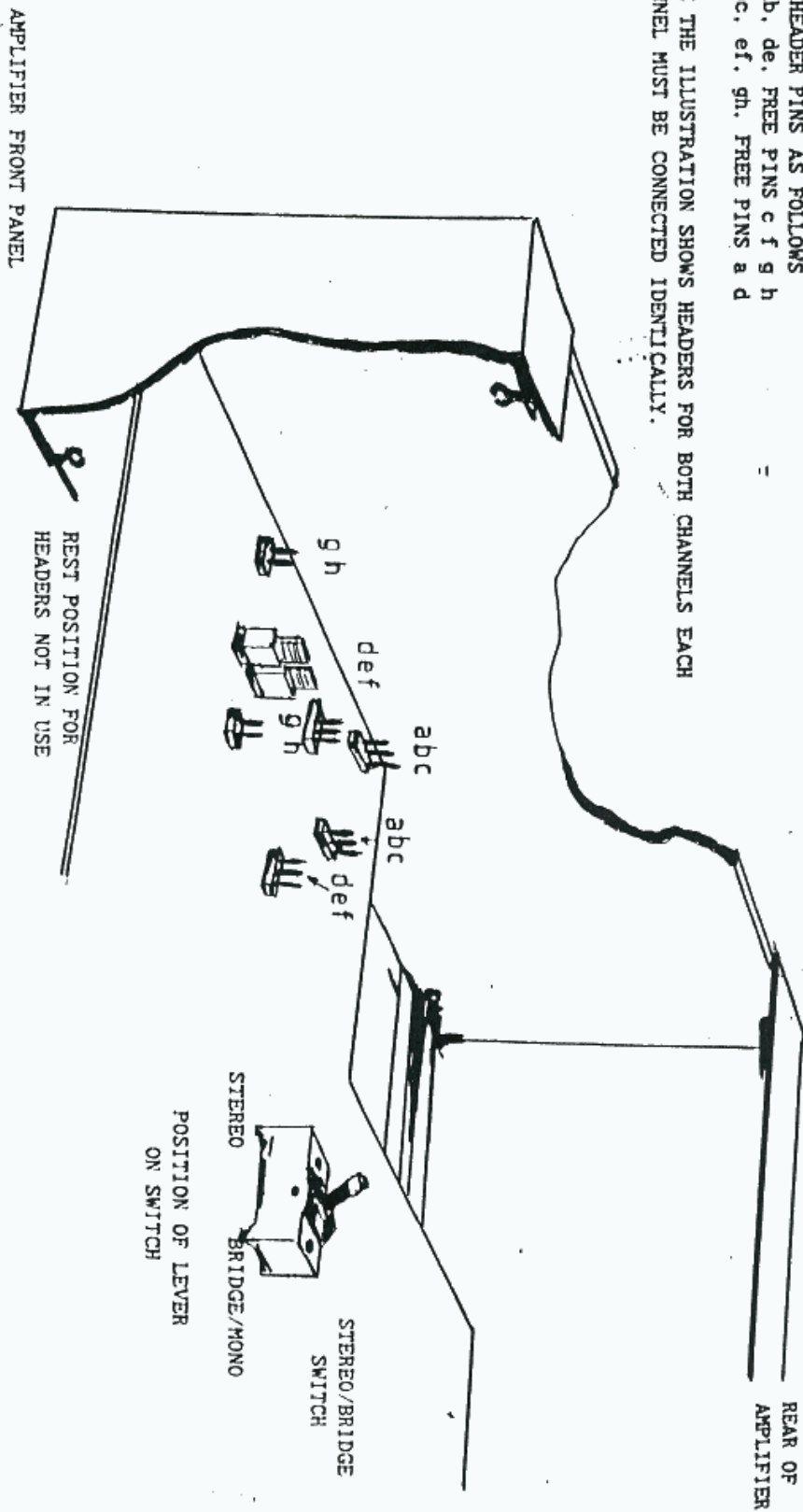
Access for service, fuses, adjustment of sensitivity, adjustment of mains supply tappings may be obtained as follows:-

- 1) DISCONNECT ALL POWER LEADS AND INPUT LEADS. CAUTION: THIS IS ESSENTIAL FOR SAFETY.
- 2) WITH A POSIDRIV SCREWDRIVER REMOVE THE 4 RETAINING SCREWS IN THE **RIGHT-HAND SIDE PLATE** AND REMOVE THE SIDE PLATE.
- 3) GENTLY SLIDE THE TOP COVER OUT OF ITS LOCATING GROOVE. YOU NOW HAVE ACCESS TO FUSES, SENSITIVITY AND MAINS VOLTAGE ADJUSTMENTS.
- 4) BY REMOVING THE LARGE LEFT-HAND SECTION OF THE BASE PLATE UNDER THE AMPLIFIER WITH A POSIDRIV SCREWDRIVER, COMPLETE ACCESS FOR SERVICE MAY BE OBTAINED WHILST STILL RETAINING A LARGE AMOUNT OF MECHANICAL STABILITY.



TO SET THE INPUT IMPEDANCE AND PHONO INPUT GAIN FOR MOVING MAGNET
OR MOVING COIL CARTRIDGES THE HEADER LINKS SHOULD BE POSITIONED ON
THE HEADER PINS AS FOLLOWS
 MM ab, de, FREE PINS c f g h
 MC bc, ef, gh, FREE PINS a d

NOTE THE ILLUSTRATION SHOWS HEADERS FOR BOTH CHANNELS EACH
CHANNEL MUST BE CONNECTED IDENTICALLY.



A48111 INTEGRATED STEREO AMPLIFIER

