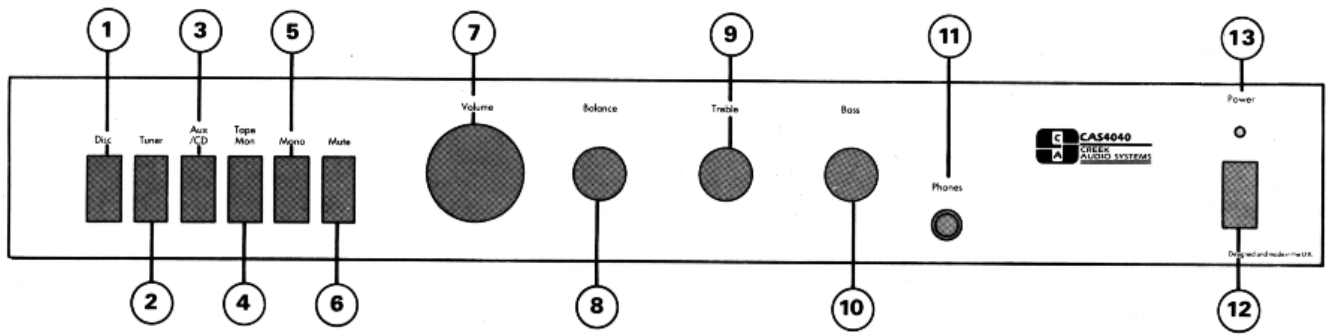


**Instructions for use**  
**Integrated Amplifiers**



# *Introduction*

Thank you for selecting a CAS integrated amplifier. You have chosen a high quality amplifier using uniquely advanced circuitry developed by Creek Audio Systems. This amplifier should give you years of trouble-free use. Please read this manual carefully to obtain the best results from your equipment, and keep it handy to refer to when necessary.



**Front panel layout and operation details**

Number	Description
1 Disc	Disc input selector
2 Tuner	Tuner
3 CD/Aux	Auxiliary/Compact Disc
4 Tape	Tape Monitor Selector
5 Mono	Mono/Stereo Selector
6 Mute	22dB Level Reduction

7 Volume
8 Balance
9 Treble
10 Bass
11 Phones
12 Mains
13 Power

Volume Control
Left, Right channel balance
Treble lift and cut - 4040 only
Bass lift and cut - 4040 only
Headphone Socket
Power On/Off
Power On indicator

### **1. Disc input selector.**

This button selects the disc input. The signal will then be processed by the disc preamplifier to compensate with the correct RIAA equalisation, applied so that the frequency response will conform with the long standing RIAA frequency compensation system, and does not include any low frequency roll off.

Further details are given in the technical specification and rear panel details section 18.

### **2. Tuner input selector**

Most medium output tuners will be suitable for use with amplifier when this button is selected.

### **3. CD/Aux input selector**

This selector allows for a fourth signal source to be selected such as another tuner, tape replay or Compact Disc (CD)/ Digital Audio Disc (DAD).

### **4. Tape Monitor selector**

This selector allows for the simultaneous recording and monitoring from a tape of any of the three inputs (Disc, Tuner, CD). Tone, Balance, Volume, etc. will have no effect on the recording. Playback of a recording may also be selected using this input. On releasing the button (press again), the signal source will revert to whatever input is selected.

### **5. Mono**

This selector brings both left and right channels together into monoral mode. If an old mono recording with excessive background noise is being played, the mono selector will reduce the high frequency noise and place the image in the middle of both speakers. It will also reduce noise on FM stereo radio if the signal is weak.

### **6. Mute**

This selector attenuates the signals to the volume control by 22dB which is useful when answering the telephone or changing records. It is also meant to be used if very low level outputs are required as it allows for better channel balance on the volume control.

### **7. Volume**

This control sets the amplitude of the output, and its range of attenuation and effective maximum volume will depend on the input level of the signals being fed to it.

N.B. if a high output cartridge or tuner is selected, then the volume control will not need to be turned as far clockwise before the maximum power output of the amplifier is achieved and vice versa.

Continuing to rotate the volume control to achieve a sound level in excess of the maximum ratings will only result in distortion and possible damage to your equipment.

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IN DISTORTION AND POSSIBLE DAMAGE TO YOUR EQUIPMENT.

### **8. Balance**

This passive channel balance control differentially alters the gain of the left and right channels. It maintains full output whilst in the middle and reduces the gain on one channel whilst increasing it on the other.

If it is necessary to set the balance control more than a few degrees from its centre position, then you should check your signal source and loudspeakers for problems.

### **9. Treble CAS 4040 only**

Both tone controls are designed to be useful rather than dramatic. The treble control has a frequency 'hinge' point at a much higher frequency than conventional circuitry (7kHz). This means that the loss of attack or presence in a recording can be restored or merely improved without annoying phase alterations at the human ear's most sensitive frequency range between 500Hz and 3kHz. The control is of a Baxendall type with both lift and cut.

### **10. Bass CAS 4040 only**

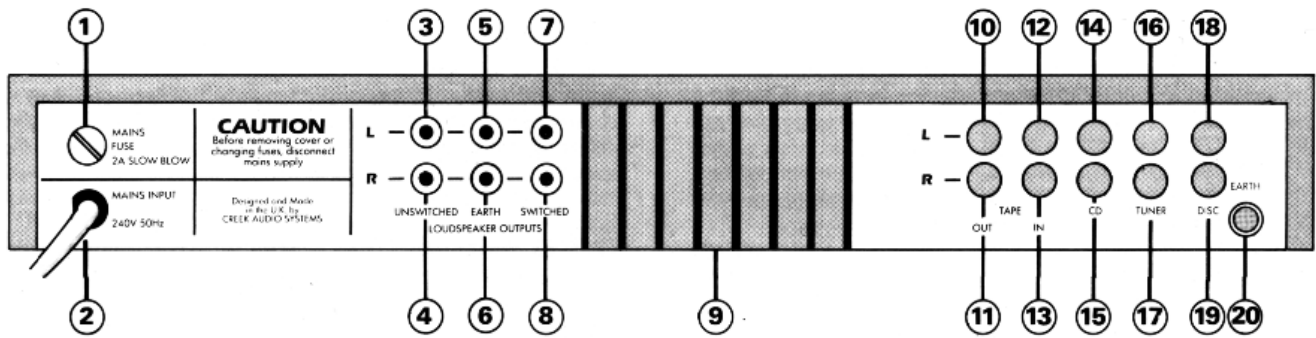
This control operates in a similar way to the treble control but its hinge point starts at about 60 Hz and raises with control rotation to approximately 120Hz. Again, this is more functional than dramatic, and has the advantage of adding another octave of bass extension to smaller speakers without colouring the higher frequencies.

### **11. Headphone Socket**

This is a standard ¼" jack socket for use with low impedance headphones. When the loudspeakers are connected to the switched output terminals at the rear, inserting the headphones will automatically disconnect the speakers. Check the rear panel details for further information (section 3).

### **12. & 13. Power ON/OFF & LED indicator**

This is the mains ON/OFF switch, with a mains fuse fixed to the rear panel. When the power is on, the LED will light.



Rear panel layout and connection details

Number Description

1	Mains Fuse holder	8	R switched speaker output	15	R CD input
2	Mains lead	9	Heatsink	16	L tuner input
3	L switched speaker output	10	L tape output	17	R tuner input
4	R switched speaker output	11	R tape output	18	L disc input
5	L earth	12	L tape input	19	R disc input
6	R earth	13	R tape input	20	Earth terminal
7	L switched speaker output	14	L CD input		

On some models switched and unswitched may be reversed.

### **1. Mains fuse holder**

The mains input to the amplifier is interrupted by a 5 × 20mm Cartridge fuse of 2A slow-blow rating. For ease of replacement it has been fitted in a screw type holder on the outside of the chassis. Before attempting to inspect the fuse make sure that the mains plug has been removed from the wall socket. This also applies to the inspection of the internal DC supply and loudspeaker fuses. If in doubt, check with your dealer.

### **2. Mains lead UK specification**

This three core mains lead should be connected to the mains in accordance with the colour code information. The mains lead wires are individually coloured and should be connected to the plug as follows:-

BROWN to 'L' (LIVE)

BLUE to 'N' (NEUTRAL)

GREEN/YELLOW to 'E' (EARTH)

If in doubt consult your dealer or a qualified electrician.

Equipment manufactured for Export will usually be fitted with a mains lead and moulded plug required for the specific country.

### **3. Left unswitched loudspeaker terminal**

This terminal is connected directly to the amplifier's output,

via the loudspeaker protection fuse. If a pair of headphones are plugged into the outlet on the front panel, the loudspeakers will not be disconnected.

### **4. Right unswitched loudspeaker terminal**

This is the same as item 3, except read 'right' for 'left'.

### **5. & 6. Loudspeaker earth**

These two terminals are the earth return terminals for both left and right hand channels. They both separately return to the central earth point inside the amplifier.

### **7. Left switched loudspeaker output terminal**

This is the same as 8.

### **8. Right switched loudspeaker output terminal**

To connect a pair of loudspeakers to this amplifier you are given a choice of whether to come directly from the amplifiers via a 2 amp fuse or to connect via the switched headphone socket. This socket is for the latter type and allows for the loudspeakers to be disconnected in the event of a pair of headphones being plugged into the ¼" jack socket on the front panel.

The disadvantage of using the switched output socket is that this route may introduce a (marginally) increased

resistance in the speaker path which has the effect of reducing the amplifier's ability to damp the overshoot of the loudspeaker cone at low frequencies, and in extreme cases it will modify the frequency response. Connection to these terminals can be made by the correct type of 4mm instrument plug, preferably the type that has a self cleaning 'knife edge' connection. A pair is supplied with the unit.

N.B. This applies to connections 3, 4, 5, 6, 7 & 8.

### 9. Amplifier heatsink

This black aluminium extrusion is the power amplifier heatsink. Care should be taken to make sure that it is ventilated properly, as prolonged high power operation will raise the heatsink to a higher temperature than with most conventional amplifiers, and may not only burn you if you touch it, but also you risk igniting any inflammable material placed near to it. So keep it away from curtaining etc., and always place the amplifier **on top** of any other equipment, such as tuners and tape recorders.

- |                              |   |                    |
|------------------------------|---|--------------------|
| <b>10. Tape Output Left</b>  | } | From Tape Recorder |
| <b>11. Tape Output Right</b> |   |                    |
| <b>12. Tape Input Left</b>   | } | To Tape Recorder   |
| <b>13. Tape Input Right</b>  |   |                    |

### 14. (L) & 15. (R) CD input

This socket is for any auxillary piece of equipment.

### 16. (L) & 17. (R) Tuner sockets

These sockets are for the connection of tuners with medium/low output levels.

### 18. (L) & 19. (R) Disc sockets

These sockets are specifically for connecting a wide range of pick-up cartridges. The CAS 4040 can only amplify and correctly match Moving Magnet cartridges, of about 2 mVolts output, plus high output moving coil types. In the 1987 version of the CAS 4140 Serial Nos. A102390, an extra circuit is fitted to allow for use of low output Moving Coil cartridges, from 100 mVolts upwards. A switch is used on the PC board to select either MC or MM. See diagram 1. No extra matching components are required for Moving Coil, as the circuit automatically compensates for different cartridges.

N.B. In some cases, more capacitance will be required to properly damp the MM cartridge of your choice. This will need fitting externally. Please consult your dealer if in doubt.

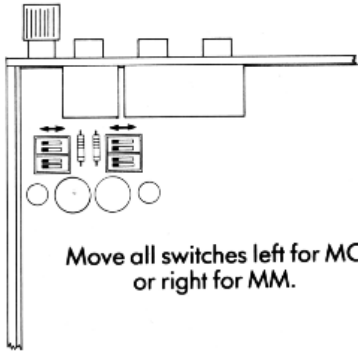
### 20. PU Earth terminal

The pick-up arm and metal chasis parts of your turntable will need earthing, and this should be separate from the



signal earth returns. This is achieved by screwing the bare wires or tag into the earth terminal next to the PU input socket.

Diagram 1.



Move all switches left for MC  
or right for MM.

Drawn in MC position.

### IMPORTANT NOTES

1. These amplifiers are designed to work into 8 ohm loudspeakers only.
  2. At least one minute is required after switch on before these amplifiers will produce their rated performance.
  3. HT fuses are fail safe devices and if blown usually indicate a terminal fault in the equipment.
  4. Speaker fuses are replaceable but usually indicate that the speaker leads or terminals have been shorted. Replacements should be only 5 x 20mm 2 amp slowblow.
  5. Shorting the loudspeaker output will possibly damage the equipment and should be avoided at all cost.
- N.B.** The warranty may be affected if damaged through misuse.

## Technical Specification of CAS 4040 & CAS 4140 Integrated Amplifiers

<b>Power Output</b>	<b>4040</b>	<b>4140</b>	<b>Stereo Separation</b>	20Hz	1KHz	20KHz	
One channel 8ohm load	35W	40W	<b>Disc Input</b>	-69dB	-67dB	-46dB	
Both channels 8ohm load	30W	35W	<b>Aux/CD input</b>	-65dB	-65dB	-50dB	
One channel 4ohm load	40W	50W	<b>Output Impedance</b>	> .03ohms			
Instantaneous peak current 4040±10A			<b>Mute</b>	-22dB			
Instantaneous peak current 4140±15A							
<b>Distortion</b>			<b>Input Data</b>	<b>Socket Type</b>	<b>Sensitivity</b>	<b>Loading</b>	
Total Harmonic distortion	20Hz	1KHz	20KHz	Disc (4040)	Phono/RCA	2.5mV	47K 220pf MM
at rated output Tuner input				Disc (4140)	Phono/RCA	100uV-2.5mV	1K-47K MC-MM
CAS 4040	-65dB	-67dB	-59dB	Aux/CD	Phono/RCA	250mV	22K
CAS 4140	-67dB	-70dB	-65dB	Tuner	Phono/RCA	250mV	47K
				Tape	Phono/RCA	250mV	47K
<b>Intermodulation Distortion</b>			<b>Disc equalisation error</b>	30Hz to 15KHz ±1dB			
19/KHz/20KHz CAS 4040	-60dB		<b>Tone Controls range</b>	±10dB 20Hz & 20KHz			
CAS 4140	-63dB		CAS 4040 only				
<b>Noise</b>			<b>Size</b>	CAS 4040	420 x 185 x 60	16½" x 7½" x 2½"	
Disc (mm) input (IHF CCIR weighted)	-79dB		<b>Weight</b>	CAS 4140	4.4kg	10lbs	
CD/Aux	-79dB				5kg	11lbs	

**N.B. Creek Audio Systems reserve the right to change or modify the specification without notice**

**Designed and made in UK by:**

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