

# Marshall

## OWNER'S HANDBOOK

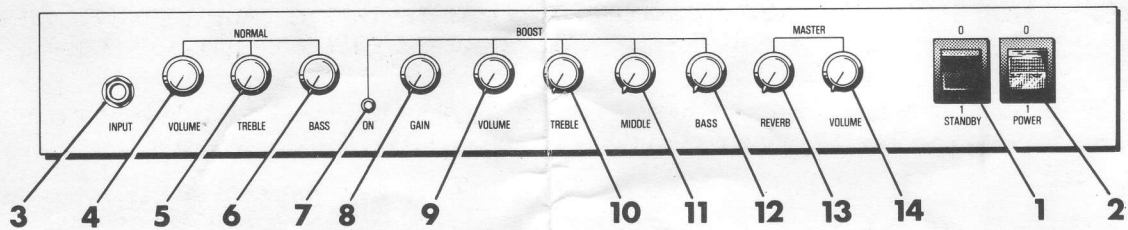
### **Model 4210** **50W. 1 x 12** **COMBO** **AMPLIFIER with** **SPLIT CHANNEL** **SWITCHING**



### **SPECIAL FEATURES**

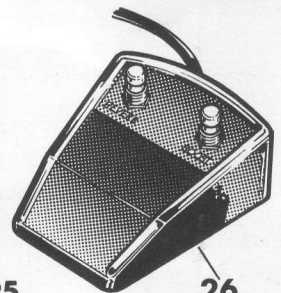
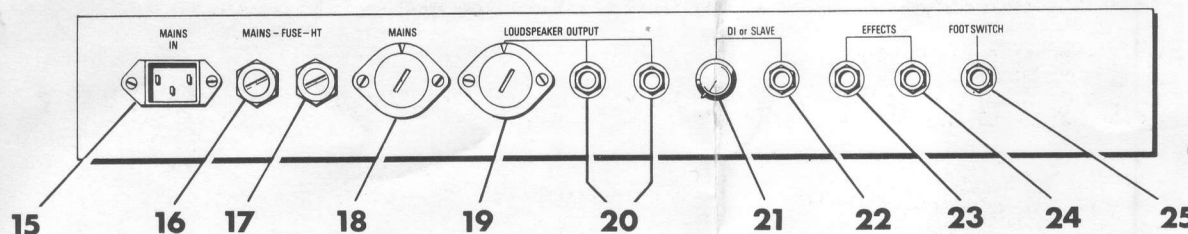
- 1** All valve construction giving 50W. R.M.S. output power into a high efficiency 80W. 12 inch loudspeaker, specially manufactured for Marshall.
- 2** Footswitchable split channel facility giving individual control over rhythm or lead settings for maximum flexibility in operation.
- 3** Highly versatile tone circuitry for any number of differing sounds from each channel.
- 4** Extra long sustain and powerful overdrive capability.
- 5** Footswitch controlled, smooth deep Hammond reverb for concert hall effects in any situation.
- 6** Effects send and return circuitry, allowing pedals to be patched in between preamp and output stages, and designed to match most effects units in operation today, without pushing them to their limits of unwanted distortion.
- 7** Super compact size, without any compromise in performance, quality or reliability.
- 8** Each amplifier chassis is constructed from a minimum of 16 S.W.G. steel, precision cut, punched, bent and seam-welded to form a substantial, rigid foundation, strong enough to take all the knocks of the road. Industrial grade cadmium passivating ensures many years of rust-free operation.  
  
All electronic components are selected and tested to out-perform their required functions, and are chosen from the finest grades available.  
  
Each cabinet is made from finest quality birch ply, corner locked and r.f. bonded for immense strength and longevity, and cotton backed P.V.C. covering is stretched and bonded on. Virtually indestructible plastic A.B.S. corner protectors are riveted into position, a heavy duty strap handle and shock absorbing feet are screwed on.
- 9** Before leaving the factory, your Combo has been thoroughly tested by a team of electronic engineers and musicians.

# FRONT PANEL FUNCTIONS



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| <p><b>1</b> Power Switch<br/><i>Controls total mains power to amplifier.</i></p> <p><b>2</b> Standby Switch<br/><i>Controls H.T. supply to amplifier valves, allows the filaments to remain heated during breaks.</i></p> <p><b>3</b> Input Jack<br/><i>Connects instrument to amplifier.</i></p> <p><b>Clean/Rhythm Channel (left-hand)</b></p> <p><b>4</b> Volume Control<br/><i>To set the level of normal or rhythm playing styles.</i></p> <p><b>5</b> Treble Control<br/><i>Controls increase or decrease of the channels high frequency response.</i></p> <p><b>6</b> Bass Controls<br/><i>Controls increase or decrease of the channels low frequency response.</i></p> <p><b>Boost Channel (right-hand) Channel Facilities</b></p> <p><b>7</b> Boost<br/><i>Indicates red when channel is Channel L.E.D. selected via footswitch.</i></p> | <p><b>8</b> Gain Control<br/><i>Controls the amount of boost drive and the degree of overdrive required.</i></p> <p><b>9</b> Volume Control<br/><i>Controls the loudness level of the channel.</i></p> <p><b>10</b> Treble Control<br/><i>Controls the high frequency content of the channel output.</i></p> <p><b>11</b> Middle Control<br/><i>Controls the middle register of the channel and at high settings, this will also modify the treble and bass.</i></p> <p><b>12</b> Bass Control<br/><i>Controls the low frequency content of the channel output.</i></p> <p><b>13</b> Master Reverb<br/><i>Controls the depth of the reverb effect in total sound output.</i></p> <p><b>14</b> Master volume<br/><i>Controls the overall output level of amplifier and loudspeakers.</i></p> |
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# BACK PANEL FUNCTIONS



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| <p><b>15</b> Mains Input Socket<br/><i>Connects amplifier to mains supply, i.e. 120/220/240V. 40/60 Hz. 175W.</i></p> <p><b>16</b> Mains Fuse<br/><i>120V.-T3A. 220/240V.-T2A. USE CORRECT VALUE FUSE ONLY.</i></p> <p><b>17</b> H.T. Fuse<br/><i>T500mA. only. (Note "T" denotes slow blow). USE CORRECT FUSE ONLY.</i></p> <p><b>18</b> Mains Selector<br/><i>Matches amplifier power transformer to the incoming mains voltage, i.e. 120/220/240V.</i></p> <p><b>19</b> Output Selector<br/><i>Matches amplifier output transformer impedance to loudspeaker load impedance, i.e. 4/8/16 ohm. Internal loudspeaker is normally 16 ohm, unless otherwise stated on loudspeaker chassis. If in doubt, check with supplier.</i></p> <p><b>20</b> Loudspeaker Jacks<br/><i>Parallel connected jacks for loudspeaker connections. Loudspeaker load must always be</i></p> | <p><i>connected. If one or both sockets are used, total impedance must be matched to selector and must not be less than 4 ohm.</i></p> <p><b>21</b> D.I. or Slave level<br/><i>Controls volume of low level output signal.</i></p> <p><b>22</b> D.I. or Slave Jack<br/><i>Jack socket carrying low level version of amplifier output, suitable for connection to recording and P.A. mixing desks, or into Slave amplifying system.</i></p> <p><b>23</b> Effects Return<br/><i>Return jack from output of external effects unit.</i></p> <p><b>24</b> Effects Send<br/><i>Signal jack to feed the input of external effects unit.</i></p> <p><b>25</b> Footswitch Jack<br/><i>Connector for boost/reverb dual footswitch unit.</i></p> <p><b>26</b> Footswitch<br/><i>Footswitch for reverb ON/OFF. Boost Channel ON/OFF.</i></p> |
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# OPERATIONAL FUNCTIONS

**PLEASE NOTE:** BEFORE SWITCHING ON THIS UNIT IT MUST BE CORRECTLY EARTHED.  
I.E. LIVE-BROWN. NEUTRAL-BLUE. EARTH-GREEN AND YELLOW.

- a. Ensure internal and/or external loudspeakers are connected (20) and properly matched to the amplifier (19).
- b. Connect footswitch (26) to correct jack socket (25).
- c. Connect external effects units (23, 24) and D.I./Slave equipment (21, 22), if in use, to the appropriate sockets.
- d. Turn volume controls to zero (4, 8, 9, 14).
- e. Check that mains settings (18) correspond to mains supply and connect to amplifier at socket (15).
- f. Switch power on (1) and allow valves to heat up to working temperature.
- g. Connect instrument to input jack (3).
- h. Switch standby on (2).
- i. Turn boost channel off and the normal channel on with the footswitch (26).
- j. Advance volume controls (4) and (14) to desired levels. Note, for clean sounds, use low normal volume (4) and high master volume settings (14).
- k. Adjust normal channel treble (5) and bass (6) controls for desired tones.
- l. Turn boost channel on and normal channel off by depressing footswitch (26), the red L.E.D. (7) will now light up.
- m. Advance boost channel volume controls (8) and (9) for desired sound, i.e. for a clean sound, use low gain (8) and high volume (9) settings. For overdriven sounds, use high gain (8) and low, middle or high volume settings (9).
- n. Adjust boost channel treble (10), middle (11), bass (12) controls for the desired tone, but note that these tone controls become less effective during high overdrive situations.
- o. Adjust reverb control (13) for desired depth of effect, using footswitch (26) to control ON/OFF function.
- p. To achieve maximum overdrive/sustain, use the boost channel, turn all the volume controls (8) and (9) to maximum and control the total output of the Combo using the master volume (14).

**REMEMBER!** Experiment with all the controls on your Marshall 4210 Combo, to achieve its maximum flexibility and performance.

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## **WARNING** *READ THE FOLLOWING LIST CAREFULLY*

- A. ALWAYS** fit a good quality mains plug, conforming to the latest B.S.I. standards.
- B. ALWAYS** wire the plug according to the colour code attached to the mains lead.
- C. NEVER**, under any circumstances, operate the amplifier without an earth.
- D. NEVER** attempt to bypass the fuses or fit ones of the incorrect value.
- E. NEVER** attempt to replace fuses or valves with the amplifier connected to the mains.
- F. DO NOT** attempt to remove the amplifier chassis, there are no user serviceable parts.
- G. ALWAYS** have this equipment serviced or repaired by competent qualified personnel.
- H. NEVER** use an amplifier in damp or wet conditions.
- I. DO NOT** switch the amplifier on without the loudspeaker connected, and ensure that the impedance selector is correctly matched to the speaker or speakers.
- J. PLEASE READ** this instruction manual carefully before switching on.

**ALWAYS INSURE THAT MARSHALL APPROVED COMPONENTS ARE USED AS REPLACEMENTS.**

# SPECIFICATION AT 1 KHz. (Unless otherwise stated)

## NORMAL CHANNEL:

Sensitivity – Controls Full 55 mV. Flat  $T-4$  40 mV.  
 $B-6$

O/L 300 mV. O/L 400 mV.

Treble – 10 KHz. – 30 dB.

Bass – 100 Hz. – 22 dB.

Mid Point – 800 Hz.

## BOOST CHANNEL:

$T-10$

Sensitivity – Controls Full .25 mV. Flat  $M-4$

$B-6$

O/L Gain Full .25 mV. Gain – 1 – 35 mV.

Treble – 10 KHz. – 30 dB. mid down

Mid – 550 Hz. – 15 dB.

Bass – 100 Hz. – 25 dB mid down

## EFFECTS SEND AND RETURN:

Level 30 mV. for full output.

## POWER O/P:

50W. R.M.S. into 4, 8, 16 ohms typical.

## REVERB:

Hammond 2 Sec. delay.

## CHANNEL AND REVERB SWITCHING:

Transistor Logic

L.E.D. display for boost channel on.

## D.I. OUTPUT:

Max O/P – 6 dBm. at Clipping into 600 ohm.

1V. R.M.S. into 10 K ohm or greater.

Infinitely variable frequency compensated.

## VALVE COMPLIMENT:

5 × ECC83. 2 × EL34 or KT77.

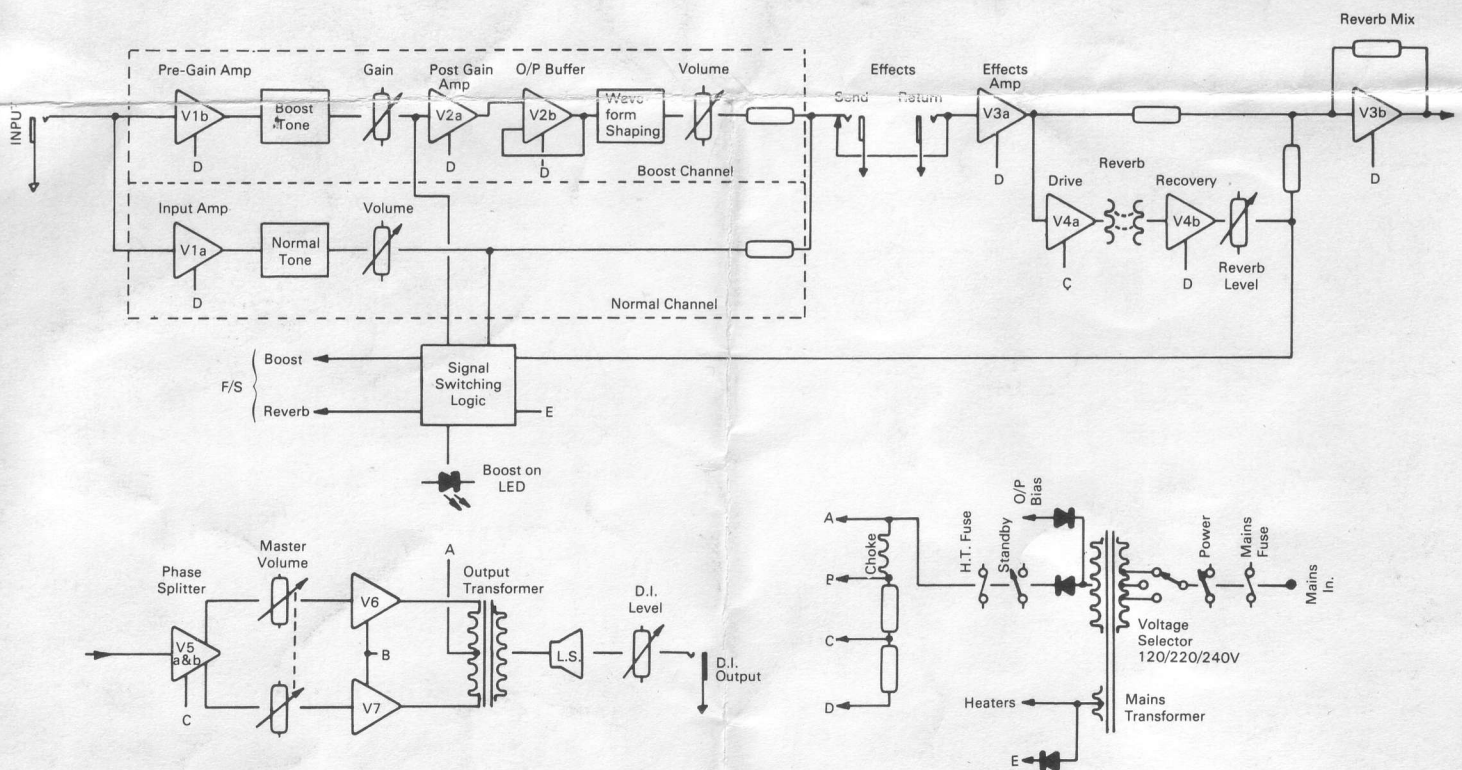
## MAINS INPUT:

120/220/240V. 40/60 Hz. 175W.

## FUSES:

Mains 220/240V. – T2A. 120V. – T3A.

H.T. T500mA.



FUNCTION DIAGRAM

The equipment is supplied by Jim Marshall Products Limited who will not be liable for any loss, injury or damage whether consequently or otherwise howsoever arising whether from negligence or otherwise.

**JIM MARSHALL (Products) LTD.**

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*Marshall*