Marshall

DBS 7400

Dynamic Bass System

7400 Head

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Handbook

WARNING!

PLEASE READ THE FOLLOWING LIST CAREFULLY.

A. ALWAYS fit a good quality mains plug conforming to the latest B.S.I. standards *(UK only)*.
B. ALWAYS wire the plug in accordance with the colour code attached to the mains lead *(UK only)*.
C. DO NOT attempt to remove the amplifier chassis. There are no user serviceable parts inside.
D. ALWAYS have this equipment serviced or repaired by competent, qualified personnel.
E. NEVER under any circumstances, operate the amplifier without an earth.
F. NEVER use any amplifier in damp or wet conditions.
G. ALWAYS ensure that the impedance of the speaker or speakers connected does not fall below the amplifiers minimum impedance rating.
H. NEVER obstruct the ventilation grills.
I. ALWAYS use Marshall D.B.S speaker leads.
J. PLEASE READ this instruction manual carefully before switching on.

Constant exposure to the high sound pressure levels of which this amplification system is capable could result in permanent damage to your hearing.

Although individuals will vary in their susceptibility to noise induced hearing loss, almost everyone will have their hearing impaired if exposed to intense sound levels for a sufficient length of time.

To prevent the occurance of permanent hearing loss, it is advisable to wear ear plugs or protectors if you are going to be exposed to high noise levels for prolonged periods.

INTRODUCTION

The Marshall Dynamic Bass System was carefully designed using innovative new circuitry to provide you with a combination of superb sensitivity and excellent control plus incredible levels of dynamic power to project and respond to the full range of contemporary bass sounds.

Superb sensitivity comes from the fully blendable mixture of a valve or solid state input pre-amp. The solid-state section offers fast, percussive attack, as favoured by many modern players, whilst the single ECC83 valve provides the smooth warmth and more compressed classic tone exclusive only to valve technology.

Excellent control is derived from comprehensive EQ and compression facilities including primary EQ, where Low and Hi rotary tone controls combine with deep and bright switches to give amazing depth and clarity to your basic sound. More precise tone shaping or the ability to set up a completely contrasting sound, is available from the switchable 9 band graphic EQ, which has been tailored to cut and boost those frequencies that are fundamental to dynamic bass performance. The built in compressor provides further control and features industry standard technology for smooth operation and the highest performance quality.

Knowing how important headroom and clean power are to accurate, powerful bass reproduction led our designers to engineer a system with headroom that goes far beyond the normal limits. Whereas a conventional bass amplifier has an RMS to peak power ratio of 1:2, the Marshall Dynamic Bass System dramatically increases this ratio to 1:10, giving you five times more headroom than an ordinary bass amplifier.

The result is a no compromise bass system with an RMS rating of 400 watts capable of delivering peaks of 4000 watts. This ensures that the system has the energy to respond accurately to even the widest dynamic range.

In sound terms this extended headroom provides incredible clarity and punch to give you the most responsive, rewarding bass amplification system that you've ever played through.

USING THE DYNAMIC BASS SYSTEM

Make all the external connections such as the send (26) and return (27) to and from your effects processor, the output to your guitar tuner (25) and connection to the footswitch for the graphic EQ (20) if required.

If you are extending the system by linking to a further D.B.S. amplifier, take a screened guitar cable from the link-out jack (22) of the controlling amplifier to the link-in jack (21) of the slave system.

Check that the Speakon connectors are fully located, twisted and locked at both the cabinet and amplifier ends (see diagram) before switching on your D.B.S amplifier. *Note:* (When systems are linked together always switch on the master system before switching on the slave system and vice versa on switching off).

Select the correct input to match your bass.

Generally speaking the low-sensitivity input (2) suits bass guitars of high output levels e.g. active basses and the high sensitivity input (1) suits lower output instruments (passive basses). As there are so many different output levels from the many types of instrument available to you, you should try both before making the decision.

Set the primary EQ to flat and make sure that the deep (6), bright (5), compression (10) and graphic EQ switches (14) and the master volume control (15) are all off.

By turning the Gain control (3) until the peak LED lights occasionally you will be setting the optimum level of input gain. Too little means that the amp is working inefficiently, too much can cause unwanted distortion.

The gain control (3) may need to be backed off accordingly if you boost the EQ, especially in the lower frequencies.

Note: (Even with the gain control off you will still get a sound through the speakers on turning up the master volume).

Turn up the master volume to the desired level and set-up your basic sound using the primary EQ controls (7&8) combined with the deep and bright switches (5 & 6). The character of the sound can be changed using the pre-amp blend control (4) from the brighter more percussive solid state tone to the warmer more compressed vintage valve tone.

When using the built in compressor the compression threshold is set using the gain control (3) and the amount of compression by the depth control (11).

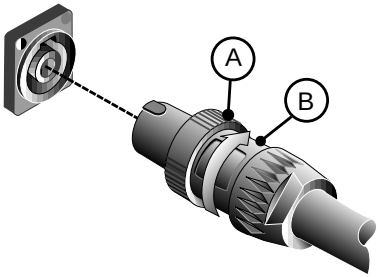
The clean power of the D.B.S is so dynamic that you may not need any further EQ although any amount of fine tuning of tone can take place using the 9 band graphic equaliser. Alternatively you can set-up an entirely different sound on the graphic then use the footswitch to switch between the two. This incredible clarity also means that you won't have to compromise your EQ settings as the volume increases , as is often the case with normal bass amplification.

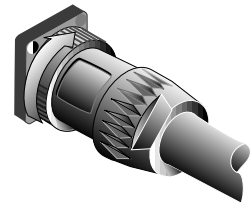
SPEAKON CONNECTORS

1.Ensure locking ring (A) is rotated fully Anti-clockwise. Insert Speakon connector into socket and align key ways.

2. Rotate body of the connector (B) fully Clock-wise.

3. Rotate locking ring (A) Clock-wise to it's full extent.





Note: (Reverse above procedure to remove connector).

MOUNTING THE 7400 IN A RACK

Though your 7400 Dynamic Bass System amplifier comes supplied in a purpose built 3U sleeve, it is also rack mountable. As with all rack mount products of substantial weight, we strongly recommend that you ensure that it is adequately supported using suitable brackets at the rear as well as the front.

(See Rear Panel diagram for positions of fixing bolts).

MODEL 7400 FRONT PANEL FUNCTIONS.

1. Hi-sensitivity Input

Input for the connection of bass guitars with lower output levels.

2. Lo-sensitivity Input

Input for the connection of bass guitars with higher output levels.

3. Gain Control with Peak LED

Controls the level of input gain.

For optimum signal level the peak LED should light occasionally.

4. Pre-Amp Blend Control

This control fully anti-clockwise routes the signal through purely solid state input pre-amp circuitry. Turned fully clockwise the signal is routed through an ECC83 pre-amp valve circuit. The various positions in between offer numerous combinations of the brighter more percussive solid-state tone with that of warmer more compressed valve tone.

5. Bright Switch

Push switch to add brightness and attack to the top end of the primary EQ.

6. Deep Switch

Push switch to add extra bottom to the low end of the primary EQ.

7. Low Primary EQ Control

Rotary control that gives + or - 15dB cut and boost of the lower end of the primary EQ.

8. High Primary EQ Control

Rotary control that gives + or - 15dB cut or boost of the primary EQ upper frequencies.

9. Compression Threshold Indicator

LED which indicates when the compression threshold is reached.

10. Compression On/Off Push Switch

Push switch which activates the compression circuit.

11. Compression Depth Control

Rotary control for selecting the depth of compression. *Note:* (This control works in conjunction with input gain control (3)). The input Gain control should be used to set the threshold level and the depth control to select the amount of compression.

12. Graphic Equaliser

9 Band graphic equaliser offering + or - 15dB cut or boost (centre flat) of the frequencies that proved to be the most effective for bass reproduction in our exhaustive listening tests.

13. Graphic EQ Master Level

Master level slider offering + or - 6dB cut or boost (centre 0dB) of the overall graphic level. This allows the accurate balancing between the levels with or without the graphic switched in.

14. Graphic On/Off Switch and Indicator

Push switch to access or by-pass the graphic with LED indicating on/off status. (The graphic is also footswitchable by any standard on/off footswitch).

For the footswitch to function the front panel switch must be in the 'On' position).

15. Volume Control

Rotary control to set the overall output level of the amplifier.

16. D.I. Pre or Post EQ Selection Switch

Selection switch to offer a studio or PA engineer with the choice of direct signal either before or after EQ and compression has been added.

17. Power Switch

On\ Off mains power switch with LED indicator and featuring soft start circuitry to minimise switch on and switch off noise.

MODEL 7400 REAR PANEL FUNCTIONS.

18. Mains Input Connector

For connection to mains power supply.

19. Twin Speaker Outputs

Heavy duty locking type sockets for connection to loudspeakers. The minimum total load is 2 Ohms.

As Dynamic Bass System cabinets are rated at 4 Ohms, combinations of two cabinets provide the optimum load.

20. Graphic Footswitch Jack

Jack socket for the connection of a single On/Off footswitch for the Graphic EQ.

21. Link In Jack

Jack socket to accept the Link output signal from another Dynamic Bass System amplifier when extending the system.

22. Link Out Jack

Jack socket to feed the Link input of another Dynamic Bass System amplifier when extending the system. *Note:* (The Link in and the Link out jacks are optimised for linking Marshall Dynamic Bass System amplifiers only).

23. D.I. Level Selection Switch

Selects 0dB or -20dB D.I. output levels for maximum interfacing flexibility.

24. Balanced D.I. Output

For direct connection to recording or PA mixing desks and switchable pre or post EQ (16).

The D.I. output is fully transformer isolated to guarantee against problems with earth loops and hence an earth lift switch is not required.

25. Tuner Output Jack

Instrument level buffered output for direct connection to an electronic tuner.

26. Effects Send Jack

Jack socket to connect to the input of an external effects processor.

27. Effects Return Jack

Jack socket to accept the output from an external effects processor. *Note:* (The output level of the effects loop is nominally centred around + 4 dB which makes it compatible with most rack effects processors).

28. Line Level Control

Rotary control providing level control of the line out from zero to +4dB.

29. Line Output Jack

Jack socket ideal for connection to home recording equipment.

THE CABINET RANGE

Using the finest materials, construction techniques and specially custom designed loudspeakers, we have created a range of extraordinary bass cabinets which perfectly complement the power and performance of the Dynamic Bass System.

The loudspeakers required highly specialised research, to enable them to handle the high continuous power levels and awesome power peaks that the Dynamic Bass System is capable of producing.

These custom speakers all feature specially reinforced cone systems, high temperature voice coils and massive magnet assemblies, all housed in ultra rugged cast chassis.

Connections to the cabinets are via heavy-duty locking sockets to ensure a safe, no loss high powered termination.

Each cabinet is ported and carefully tuned to its matching speakers and integrates perfectly with other models in the range to cover the entire spectrum of bass sounds.

Model 7410 4x10 with Horn (800 watts RMS -4 Ohms).

This cabinet has an unusually deep bass response for it's type. Superb transient attack is provided by the high frequency horn which features a 6 position attenuator control, from the horn fully off at one extreme to the horn fully on at the other extreme.

The 7410's tight and punchy performance totally suits upfront modern styles of bass playing.

Dimensions - Height 698mm x Width 698 mm x Depth 380mm.

Model 7412 4x12 (800 watts RMS -4 Ohms).

Recognising the enormous potential that the 4x12 cabinet has to offer for bass, considerable engineering time was devoted to the specially designed speakers and cabinet of the 7412.

Combining many of the best characteristics of the 2x15 and 4x10 cabinets together, the 7412 has plenty of bottom end with rapid transient attack. This is the ideal cabinet for playing situations requiring a single speaker cabinet with maximum tonal response.

Dimensions - Height 1000mm x Width 698mm x Depth 489mm.

Model 7215 2x15 (600 watts RMS -4 Ohms).

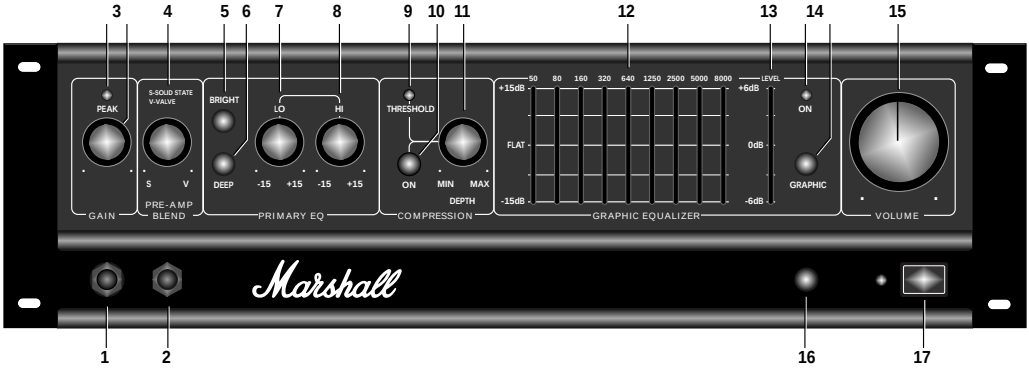
The model 7215 features drive units designed to achieve superb, high sensitivity bass response.

In addition to forming the foundation of a serious bass system when combined with either the 7410 or 7412, this unit's complementary balanced high end provides enough presence and attack to allow it to be used on its own.

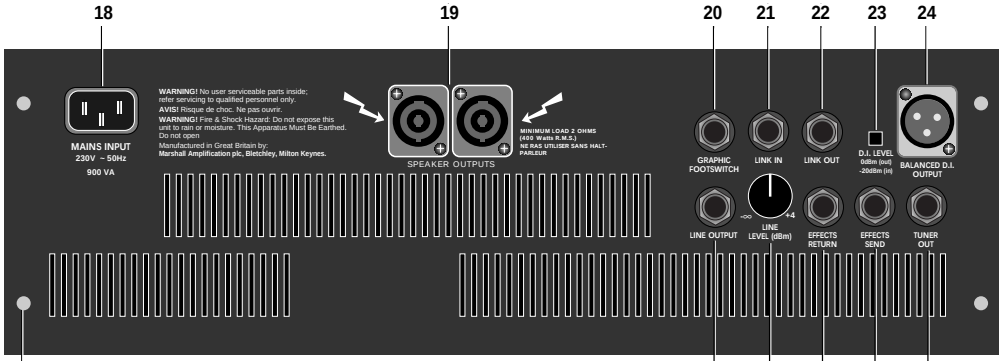
Dimensions - Height 1000mm x Width 698mm x Depth 489mm.

Note: (The RMS power handling figures are for comparison only when used with non Dynamic Bass System amplifiers. The peak capacity of these cabinets is individually matched to the performance of the Dynamic Bass System amplifier).

Front Panel



Rear Panel



Rear fixings for support brackets when rack mounted (4 off)