ABH

OPERATING MANUAL AND USER GUIDE

ABH120C ABH180H & BLS1215

Albion
AMPLIFICATION

www.albionamps.com

Contents

Important Safety Instructions

1. Read these instructions – All the safety and operating instructions should be read before this product is operated.

2. Keep these instructions – The safety and operating instructions should be retained for future reference.

3. Heed all warnings – All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow all instructions – All operating and use instructions should be followed.

5. Do not use this apparatus near water – The appliance should not be used near water or moisture – for example, in a wet basement or near a swimming pool etc.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13. Unplug the apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way including: power supply cord or plug damage, liquid spillages, objects falling into the unit, exposure to rain/moisture or impact damage.

15. Please keep the unit in a well ventilated environment.

16. CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

17. WARNING: To reduce the risk of fire or electric shock do not expose this apparatus to rain, moisture and dripping or splashing of liquids. Containers filled with liquids such as vases or drinks should never be placed on top of or near the unit.

18. WARNING: The mains plug/appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.

19. The lightning flash with arrowhead symbol is to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

    - Warning: To reduce the risk of electric shock, do not remove cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.

- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

20.  Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.

21.  Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

22. WARNING: The terminals marked with the symbol of " ⚠ " may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready-made leads or cords according to manufacturer's instruction.

23. "Class 2 Wiring" for all other TERMINALS provided the audio output power exceeds 10W per channel under normal operating conditions or the apparatus is intended to be installed or interconnected in the field by a SKILLED PERSON.

Important Warnings

⚠ ALWAYS read the manual of your new amplifier – even if you are experienced with guitar amplifiers and their technology! There could be something important that you need to know.

⚠ ALWAYS check that your new amplifier is suited to the mains power supply in your country.

⚠ NEVER disconnect the earth (ground) connection from your amplifier. It is there to prevent you from receiving a fatal electric shock!

⚠ NEVER use your amplifier equipment in a high moisture environment (such as rain) or allow it to get wet.

⚠ ALWAYS use correct and well maintained cables for all inter-connections whether for power, speaker or signal connections. If in any doubt, get them checked or renew immediately.

⚠ NEVER use your amplifier products with any cooling vents covered, even partially. Your amp loves being fed nice cool air!

PARTICULARLY with valve (tube) amps allow your amp to warm up before playing, 5 minutes is a good length of time. Also allow your amp to have a good cool down after playing and before moving it, especially into the back of a car on a cold winter's night! Your valves will last longer if you give them a little respect and TLC. Valves are pretty tough when you think of what they are made from – but can be very fragile if treated with physical abuse.

⚠ ALWAYS use a cable rated for loudspeaker connection use for connecting your amplifier to your loudspeaker system. DO NOT use a screened guitar cable for speaker use.

⚠ NEVER use your amplifier without it connected to a suitable matched loudspeaker system.

WARNING! Sometimes parts of the outside of your amplifier may get hot to the touch. This is quite normal and will be within safe operational limits. These limits are set by various countries safety approvals committees, and we at Albion Musical Instruments design, build, test, and have approved our products to these international standards. I.e. CE, UL, CSA, CB, ETL etc.

EMC INTERFERENCE. Even though all Albion Musical Instruments products are designed and tested to international electro-magnetic interference standards, please note that cellular phones in close proximity may cause some interference with your amplifier.

⚠ ALWAYS have your amplifier serviced by a technician qualified in servicing musical instrument amplifier products. If in doubt please contact your dealer.

Designer's Introduction

The **ABH120C** and **ABH180H** bass combo and head are part of the *Albion* **ABH** bass range. The design follows on from their bigger brothers (**ABH200C** and **ABH300H**) and as such feature a valve (tube) based preamp and the same heavy duty, very musical, BJT power amp topology. As with all our bass products these amps are heavily engineered for great sound at all times and conditions and provide a very solid and tuneful bass tone that go beyond their lower power ratings.

Please enjoy using these amps that we think will fulfil your playing needs.

Thank you

Outline Specification

The **ABH120C** combo and **ABH180H** head amplifier circuit utilizes a combination of technologies to provide optimum performance required for high class consistent playing night after night. Both amplifiers use the same circuitry, only differing in the power supply transformer values to provide the required power output.

The main preamplifier and tone forming circuit section uses 1 double triode low noise 7025/12AX7/ECC83 valves (tubes) including the Bass and Treble EQ circuits, running from a 380 volt HT power supply and DC heaters. The output from the valve preamp circuit then passes through the sweep-able semi-parametric Mid circuit, which is separate from the preamp.

The power amplifier stage is an extremely rugged but very musical bipolar transistor design that delivers the wide range response required for the punch and wide bandwidth required by today's bass players. The power stage is pretty much OVER-engineered to maintain night after night of high level bass guitar playing without compromise. As mentioned above, the power stage is very musical, it has a very sweet tone and handles being pushed into distortion (which is a very big test on any bass product!) with ease and without any ultra harsh unpleasantness – it really delivers the goods with what we think is a pretty superb sound level (SPL) for 120 and 180 watt bass rigs.. As with the other power items the power transformer is also larger than what other manufacturers put in their comparative bass amps. Why? Because it helps deliver the lowest notes without batting an eyelid! It doesn't run out of steam!! And also helps keep things very cool (except for the preamp valves of course!

The **ABH120C** and **ABH180H** amplifiers have an impressive array of controllable options that make for a very versatile bass system, covering gain variations for both active and passive guitars, plus some very neat tone contouring options that are both simple to operate yet provide a wide range of bass tones.

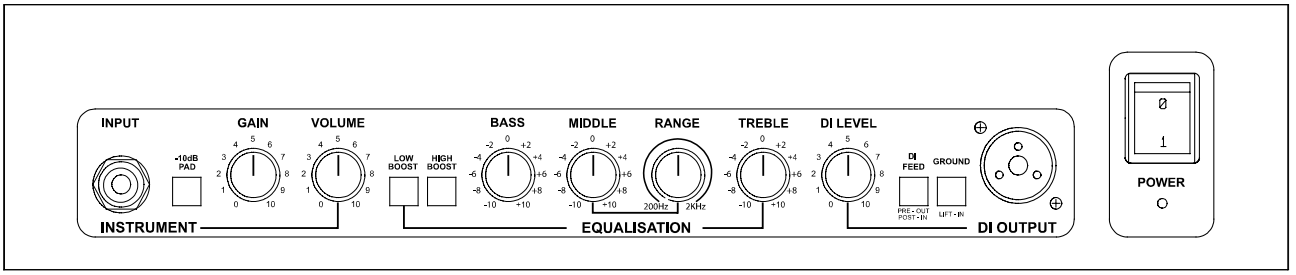
There is also a built-in "DI" system that allows the amp to feed a recording and other sound system. This DI output runs in balanced XLR mode but can be externally wired to suit an unbalanced system. It has its own Level control and can be switched to pre/post signal connection and can be ground lifted to reduce any "hum" problems

The signal handling capabilities of **ABH** bass amps puts you in control of the dynamics that you want - be it from clean, warm Jazz, through to overloaded Rock bass styles. Our bass amps and speaker systems are designed to deliver and handle them all.

The **ABH120C** combo comes complete with one of our own custom designed and built Albion 12" bass guitar loudspeakers wired for 8ohm operation. This speaker has been specially designed for this combo, enabling it to deliver great low end from a small cabinet.

ABH120C Combo and ABH180H Head Features and Controls

Front Panel



INSTRUMENT INPUT STAGE

INPUT – Mono ¼" Jack socket for instrument input. Use a properly screened "guitar" cable for interconnection. There are many different makes of guitar cable available, ranging from fairly inexpensive to very expensive. Each have different characteristics, and depending on your particular guitar will give different results, so experimentation and help from your dealer is the best advice we can give.

-10dB INPUT PAD – normally the input jack connects directly to the input grid of the first valve amplifying stage at high impedance (1Megohm). This is the switch out position, and is suitable for most purposes. However, in the case of high output active guitars and preamps, the signal level may be too high for the input stage to handle without distorting. By pressing the -10dB PAD switch IN the input circuit is reconfigured to a) attenuate the incoming signal by -10dB, and b) adjust the input impedance to a more suitable value for active guitars (approx 100Kohm).

INPUT GAIN – this control determines the amount of signal that the first amplifier gain stage lets through to the rest of the amplifier. It is pretty straightforward in use – lower settings are clean – high mid settings are in the start of distortion range – and high settings are in the overdrive range.

OUTPUT VOLUME – this quite simply controls the output of the preamp, giving you the required sound level and balance that you require.

EQUALISATION STAGE

EQ CONTOUR EXPANSION SWITCHES – the EQ system of the ABH bass system is very wide ranging and very versatile in its own right, but the use of the four expansion pushswitches opens up even more possibilities.

LOW BOOST – conversely the Low Boost switch reconfigures the input stage circuit to boost the very low frequencies in a very warm and musical way.

HIGH BOOST – as its name implies this switch boosts the high frequencies adding great "presence" and "cut" required for modern bass playing styles. It adds "snap" without adding harshness.

BASS & TREBLE EQ ROTARY CONTROLS – although the Treble and bass EQ circuit is valve driven, it is of the cut and boost variety, and therefore is flat in the mid position.

MIDDLE EQ & RANGE CONTROLS – as stated earlier the Middle circuit is after the valve preamp, and again is of the cut and boost variety. The Range control continuously varies the Mid centre frequency between 200Hz, and 2kHz. Because it is independent of the Treble and Bass circuits, even bigger variations in how the middle frequencies react are possible.

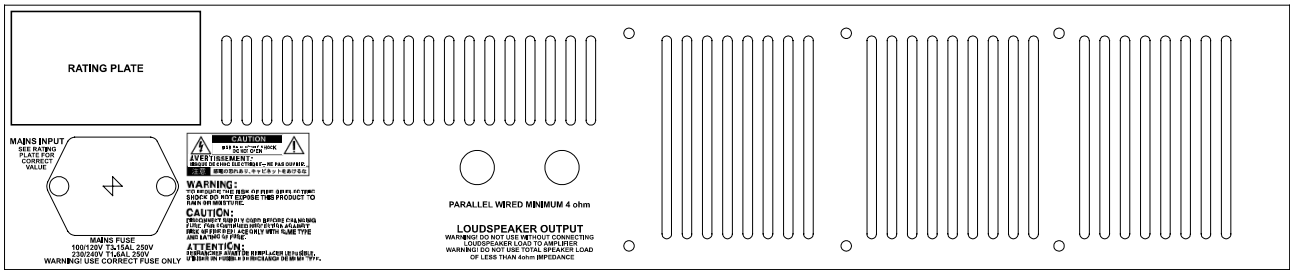
DI OUTPUT LEVEL – This rotary control gives an independent output level for the DI output.

DI FEED PRE/POST SWITCH – This push-switch connects the DI circuit to either run in parallel with the amplifier input circuit (PRE), or is fed from the power amplifier output derived from the speaker connection (POST).

GROUND LIFT SWITCH – This switch lifts the DI socket ground connection from direct ground connection to be higher impedance. This is used to eliminate any mains ground hum that could be generated between the amplifier and other mains connected equipment, such as a mixing desk.

MAINS POWER SWITCH – this is self explanatory in that it turns the mains power supply coming into the amplifier off (0) or on (1). Because the preamp valve requires time to "warm up" when initially turned on, there will be a short time lag before the amplifier is ready for use after switching on.

Rear Panel (ABH180H shown)



LOUDSPEAKER OUTPUTS – **ABH180H** is fitted with 2 combined Jack connectors wired in parallel. The maximum loading on the amplifier is 4 ohms, hence do not connect to any speaker system whose total impedance is less than 4 ohms!

The matching Albion bass loudspeaker cabinets (BLS 115, BLS 210, BLS 410) are all 8 ohm cabinets, thereby allowing the use of up to 2 cabinets at any time. The matching BLS1215 cabinet is a 4 ohm cabinet and therefore full power can be provided with just one cabinet. The BLS1215 is also designed to provide great bass tone in a compact cabinet with minimum floor area thereby is very useful for playing on small stages where equipment placement is critical.

The **ABH120C** 1 x 12" combo is fitted with one 8 ohm loudspeakers to match the combo required 8 ohm operation..

MAINS INPUT – the mains input receptacle allows for the connection of the mains power cord, and also houses the mains power fuse. To comply with International Safety Regulations (for your safety and protection) your amplifier is supplied to work with the mains supply in your country. Please check the white rating label fitted to the back panel. If in any doubt, please check with your supplier. It is of utmost importance to use the correct earthed and rated power cord, as is supplied with your amplifier.

WARNING! DO NOT USE WITHOUT CONNECTING THE EARTH (GROUND) WIRE.

In the case of the mains fuse blowing, this can be changed by removing the power cord connector from the amplifier receptacle and with the aid of a small screwdriver the small drawer in the receptacle can be withdrawn allowing access to the mains power Fuse.

WARNING! USE THE CORRECT REPLACEMENT VALUE ONLY!

A WORD OF ADVICE about fuses – if a fuse blows it is usually for a very good reason, it could be anything from a voltage spike on the mains power, to a serious malfunction of your amplifier. Fuses are there for your protection – treat them with respect, and never replace with the wrong value!

Specification

ABH180H – 180 watt Head Bass Amplifier

120 watts RMS output into 8 ohm impedance loudspeaker load.

180 watts RMS output into 4 ohm impedance loudspeaker load.

1 off 7025/12AX7/ECC83 double triode small signal valve (tube)

Passive cooled BJT power output stage

Mains Fuse = 100V 50/60 Hz supply = T3.15AL(time lag) 250V rated 20mm glass fuse

Mains Fuse = 120V 60 Hz supply = T3.15AL (time lag) 250V rated 20mm glass fuse

Mains Fuse = 230V 50 Hz supply = T1.6AL (time lag) 250V rated 20mm glass fuse

Mains Fuse = 240V 50/60 Hz supply = T1.6AL (time lag) 250V rated 20mm glass fuse

Warning! Where fuses specified are rated at 250V please be aware that this is the rating of fuse value and NOT the rating of your particular amplifier

Sizes – Dimension = 490mm (W) x 150mm incl. feet (H) x 270 (D) – Weight = 11.7Kg

ABH120C – 120 watt Combo Bass Amplifier

120 watts RMS output into 8 ohm impedance 12" loudspeaker load.

1 off 7025/12AX7/ECC83 double triode small signal valves (tubes)

Passive cooled BJT power output stage

Mains Fuse = 100V 50/60 Hz supply = T2.5AL (time lag) 250V rated 20mm glass fuse

Mains Fuse = 120V 60 Hz supply = T2.5AL (time lag) 250V rated 20mm glass fuse

Mains Fuse = 230V 50 Hz supply = T1.25AL (time lag) 250V rated 20mm glass fuse

Mains Fuse = 240V 50/60 Hz supply = T1.25AL (time lag) 250V rated 20mm glass fuse

Warning! Where fuses specified are rated at 250V please be aware that this is the rating of fuse value and NOT the rating of your particular amplifier

Sizes – Dimension = 490 (W) x 500 incl. feet (H) x 370 maximum (D) – Weight = 25.3Kg

CAUTION!

There are no user serviceable parts mounted inside your amplifier! Refer servicing to suitably qualified personnel.

This means that for your own safety and the correct performance of your amplifier, do not open the chassis unless you really do know what you are doing!

BLS1215 BASS CABINET

This cabinet is especially designed to match the dimensions of the **ABH180H** bass guitar amplifier, and as such presents a minimum footprint for both ease of carrying and also taking up a minimum of stage area, especially useful on small crowded club stages. It features one 12" and one 15" *Albion* custom designed and built bass guitar loudspeakers wired in parallel for 4 ohm operation.

Specification:

Dimension = 490 (W) x 840 incl. feet (H) x 400 (D) – Weight = 37.6Kg

Power Rating = 300 watts RMS @ 4 ohms impedance

IAG House, Sovereign Court, Ermine Business Park, Huntingdon, Cambs, PE29 6XU, England
www.albionamps.com