BEAT

B-100

Owners manual

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DENSEN AUDIO TECHNOLOGIES BEAT B-100, DP-01 OWNERS MANUAL

Congratulation with your purchase of a Densen BEAT-series amplifier, please read the owner's manual carefully before operating the equipment.

Section 1:

What to do when you open the box.

Each BEAT amplifier has been very carefully inspected before it left the factory. It has been checked for physical and electrical faults, and it has been adjusted trough a factory burn-in test.

Please check the amplifier for physical damage. Then check that there is a powercord with your countrys male plug mounted. Save the shipping carton, so that you can use it, if the amplifier ever needs to be shipped again.

If your inspection shows any damage, contact your dealer immediately, and request the name of the carrier, so that a written claim to cover shipping damage can be initiated.

THE RIGHT TO ANY CLAIM AGAINST A PUBLIC CARRIER CAN BE FORFEITED IF THE CARRIER IS NOT NOTIFIED PROMTLY AND IF THE SHIPPING CARTON AND PACKING MATERIAL ARE NOT AVAILABLE FOR INSPECTION. SAVE ALL PACKING MATERIALS UNTIL THE CLAIM HAS BEEN SETTLED.

Section 2:

Placing the amplifier.

The BEAT B-100 uses an internal heatsink, and has been made so the cabinet also acts as a heatsink. Adequate air circulation must therefore be available to ensure cool operation of the amplifier. Therefore do not cover or partially cover the amplifier. Place the BEAT B-100 on a hard, flat surface to ensure air circulation on all sides. Do not place the amplifier on carpets or other soft materials, as this will lower the cooling of the amplifier.

Do not expose the amplifier to excessive heat, cold, sunlight, moisture, or dust. Clean only with a soft, dry or moist cloth.

Section 3:

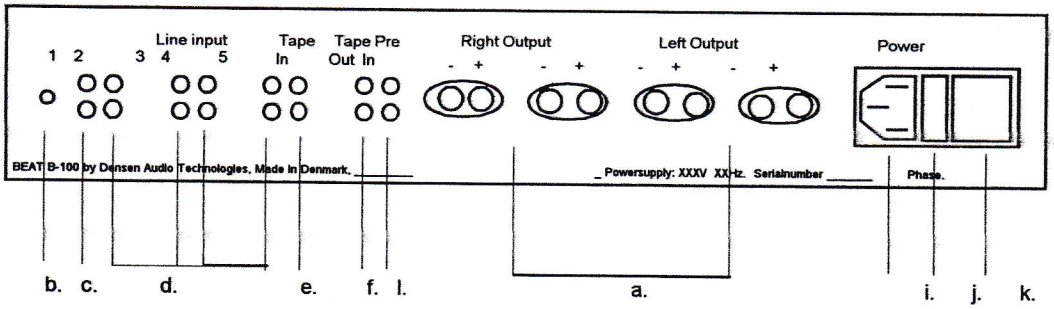
Connecting the amplifier.

Warning: Always make sure that the power is turned off and the amplifier is unplugged before connecting or disconnecting any inputs or outputs.

All connections are located on the rear of the amplifier. The inputs are via high quality goldplated RCA-type phono plugs, which are mounted directly to the printed circuit board, to obtain the shortest possible signal path.

Please refer to the drawing on next page for a diagram of the connections on the rear of the amplifier.

BEAT B-100 Back panel connections:



a.: Speaker outputs.

The BEAT B-100 has outputs for one pair of speakers. The reason for the two pairs of output 5-way bindingposts per channel, is that the BEAT B-100 is prepared for bi-wiring of the speaker. To use bi-wiring you need a speaker with seperate inputs for high and low frequecies. You then connect seperate speakercables for high and low frequencies to the two 5-way bindingposts on the speaker outputs of the BEAT B-100. By using bi-wiring you seperate the signal for high and low frequencies to obtain better signal purity.

b. Ground connector.

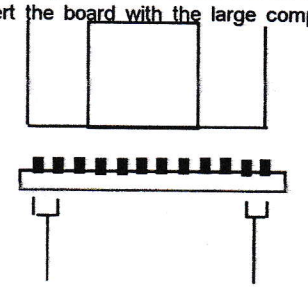
The BEAT B-100 has connection for ground wire, this is basically for use with turntables to avoid hum.

c.: Line 1 input:

The BEAT B-100 has a special feature on the line input 1. It can either be used as normal line input or it can be converted to either MM or MC input for turntables by using the DP-01 MM board or the forthcoming DP-02 MC board.

This is done by removing the top-cover and inserting the board to the slot on the right hand side of the circuit board (when seen from the front). Insert the board with the large components facing down, into the cabinet.

Internal wiev of the socket for the phonostage in the BEAT B-100:



When the BEAT B-100 is not used with the DP-01 or DP-02, the four golden pins (and ONLY these) which are marked on the above drawing should be short-circuited with the enclosed jumpers. Otherwise it will

d. Line inputs 2, 3, 4 and 5.

Besides Line input 1, the BEAT B-100 has inputs for 4 other line level sources. These can be CD players, Tuners, RIAA-stages, TV-sets, Videorecorders, Laserdiscs, and other signal sources with a line level signal.

e. and f.: Tape input and outputs.

The BEAT B-100 has inputs for 1 taperecorder. It can be a DAT recorder, DCC recorder or another type of tape recorder. (The tape-input can also be used as line input if you need more than the 5 line inputs). To connect a Taperecorder to the BEAT B-100 use the following procedure: The outputs of the taperecorder are connected to the input named "Tape input" on the BEAT B-100. The inputs of the taperecorder are connected to the output named "Tape output" on the BEAT B-100. When the taperecorder are not in use, it should be switched of, to avoid their record inputs distort the signal from the BEAT B-100, trough the return signal from its record input, into the tape output of the BEAT B-100.

g.: Pre-Out.

The BEAT B-100 has output for 1 poweramplifiers. This means it is possible to use the forthcoming BEAT B-300 poweramplifier for bi-amping if wanted. Please note the Pre-Out is a passive pre-out without any gain, it can therefore only be used with poweramplifiers which has an extra high gain for passive preamps, as for example the BEAT B-300.

i.: Powerconnection.

The powerinput is obtained by connecting the IEC powercable to the IEC input socket at the back panel.

Mains polarity: The "live" pin of the mains socket is marked ("Phase") to allow connecting of the power cord and plug with correct mains polarity.

Correct polarity improves the resolution of the extremely subtle decaying of sound on its way to silence after a transient. This effect is essential to the realism of music reproduction.

j.: Fuse.

The AC line fuse for the DM-10 is: 100-120V model: 8 amp slow blow. (or 250V 4 amp slow blow fuse)

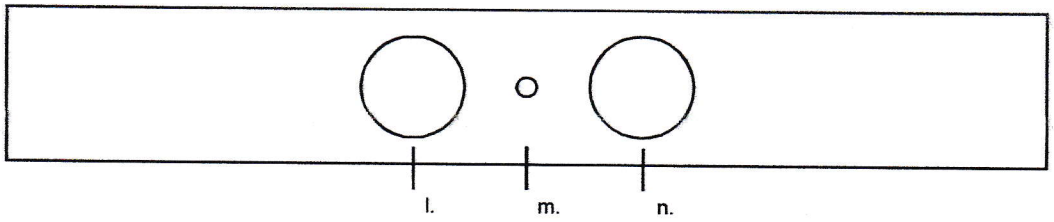
200-240V model: 4 amp slow blow. (or 250V 4 amp fuse)

Which voltage model your amplifier is, is written on the back panel.
The fuses should only be replaced with fuses of the same type and rating. Replacement with a fuse of higher value and/or different rating will not protect the amplifier, will void the warrenty and may cause a fire hazard.

k.: Powerswitch.

Power/standby: We recomend leaving the amplifier on all time for optimum sound quality, and simply turn down the volume when the amplifier is not in use. The power switch on the rear panel should only be used when disconnecting the unit for longer periods.

Front panel layout BEAT B-100:



l.: Volume.
The knob on the left hand side of the front is the volume-knob. When the amplifier is not in use, the volume should be turned down.

m.: Power indicator.

Powerindicator: The powerindicator is a red light, placed between the two knobs.

n. Selector.

The knob on the right hand side of the cabinet is the input selector. The BEAT B-100 has input for 5 line signals and 1 tape input. The inputs are from left to right: Line 1, 2, 3, 4, 5, tape.

Please note: Tape monitoring during recording is not possible, because the tape loop of the BEAT B-100 has been isolated from the signal path, to preserve sound quality. For tape monitoring, use headphones at the tape recorder.

Section 4.

The BEAT B-100 has an internal security circuit, which monitors the amplifier and protect it against all kinds of faults. However we must warn against short-circuit of the output-stage.

CAUTION: BURN-OUT OF THE OUTPUT STAGE BECAUSE OF FAILURE TO OBSERVE THE FOLLOWING PRECAUTIONS WILL VOID THE WARRENTY.

There is no such thing as absolute reliability or protection when amplifiers are abused. While the amplifier has been designed to operate normally under normal conditions, it may not be impervious to gross abuse. There is one condition which must allways be avoided: This condition is called RF detdetection and because Densen amplifiers have such an extremely wide bandwidth, RF Detection will almost certainly cause failure of the output devices if it occurs. Damage to, or failure of this equipment due to RF Detection is considered abuse, and is specifically excluded from the Densen warrenty. The following acts cause RF Detection and MUST BE AVOIDED:

1) Connecting the inputs or outputs while the amplifier is ON.

2) Using the "thumb test". It is a dangerous habit to connect cables to the inputs, touching the other end of the cable while the amplifier is ON. This may not only cause amplifier failure but may destroy your loudspeakers due to the high power surge emitted from your power amplifier.

It is essential to follow the procedure of completely hooking up your system before turning anything on. A few simple precautions will contribute to trouble free performance.

Densen is not responsible for damage to speakers or other components due to their inability to handle the amplifiers output or any other misuse.

Section 5.

Maintenance.

The cabinet and the knobs of the amplifier are all made by non-magnetic aluminum, to avoid magnetic interference. The front is made by 25mm acrylic, which is also non-magnetic.

Clean only with a soft, dry or moist cloth. Be very carefull not to scratch the acrylic front.

WARNING

Do not spray or use liquids of any kind on the surfaces of the amplifier

Section 5.

Servicing: If you have any problems with your Densen amplifier contact your dealer or your country's appointed distributor.

Warrenty: The Densen amplifiers are guaranteed against faults in material or construction for a period of 12 months from the date of purchase. Please keep your reciept as proof of purchase date. This warrenty applies only if the product is serviced solely by the authorized agents of Densen Audio Technologies. This warrenty is void in cases of damage caused by misuse, mishandling, accident, tampering, or unauthorized modification. There are no user-serviceable parts inside. Please keep the original packing materials for safe future transportation.

TECHNICAL SPECIFICATIONS

Input sensitivity:All inputs:	280mV
Input impedance:	22 Kohm.
Frequency response:(+0 -3db)	2-200,000. Hz
THD + Noise @ rated output:	Less than 0,01%

Signal to noise (Rated output, "A" weighted): more than 95 db.

Power consumption:

- Minimum (idle):	10-15W
- Maximum:	250W
Poweroutput: per channel in 8 ohm:	60W
per channel in 4 ohm:	100W
Powersupply size: Transformer:	360VA
Storage capacity:	40.000uF
Amount of rectifiers: (called power-supplies by US and Japanese manufacturers)	2
DC output offset: typically:	less than 40 mV.
Weight:	9,6 Kg.
Shipping weight:	11,4 Kg.

Dimensions excluding knobs and sockets.(WxDxH): All models:440mm x 300mm x 68mm,

DP-01 Technical specifications:

Frequency responce: 20-20.000 Hz +0 -1db.

Signal to noise ("A" weighted): 85 db.

Input impedance: 47K

Input capacity: 100 pF

Channel seperation: 90db.

General: All specifications subject to improvement without further notice.