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Introduction

Thank you for purchasing the Whest Audio **Mastering Buffer BII** final output stage.

As you know this unit is designed to retrieve the maximum amount of information from your digital audio devices but doing it in the analog domain. It does this by using a proprietary high speed, Class-A all discrete transistor, low noise audio circuitry using topology gathered from the R&D gathered from our past DAP (**D**iscrete **A**nalog **P**rocessing) programme and the TITAN Pro II 228 phonostage.

Brief history

Our background in the recording industry both in the recording and product design arenas has shown us that although the 16 bit and 24 bit processing format used in ALL CD players and many streamers are decent, their driver and output stages completely fail them. Most mid-band/high-end CD players and streamers use very good quality IC chip designs for their driver and output stages and even if they use a complete discrete transistor type output stage ALL OF THESE designs fail to look at the actual requirements of driving the following preamp/amplifier input stage. On 'paper' the output stages look

good but they all lack current drive and high voltage rails, just 2 things that are absolutely required to pass the signal from these sources to the following amplifier.

We at whetst audio set about trying to resolve more information from these formats for a completely different project we were working on for a worldwide known UK based musician. In that project the musician wanted far better audio from his already high-end pro-spec digital audio interface and taped based back catalogue.

Forward thinking

Because of our very close links with the music recording industry we were able to measure several pro-grade ADC audio interfaces, high-end domestic audio ADCs and CD players. All exhibited the same thing - their outputs were all being driven incorrectly in that the signal amplifier stages did not take into account what the **post DAC** signal needs to get to the following amplifier. A good quality 16 bit processed signal can in reality sound very good but only if the DAC output drivers can do their job properly....and we mean properly!

With the results and the research acquired from the DAP programme we then went about designing a phase corrected, ultra wide band, high-current, all discrete Class-A final output *model* for our test CD player. The bandwidth of the prototype extended to 245khz and had a phase deviation of just 2degs broadband which was also channel matched.

The complete lack of amplifier switching due to the Class-A topology, near zero phase deviation, high current drive and an extended hf response enabled us to hear further into the soundstage while extracting SO MUCH MORE information. Even our *test subject* £400 CD player running through the prototype Mastering Final Output Stage sounded like a high-resolution monster. Most of the listeners in the studio thought they were listening to a 24/192 file, while other thought it was a DSD file or better !!!

For the final production version we decided to extend the frequency response, lower the phase deviation, increase the operating voltage while keeping the noise levels vanishingly low. The version you will be listening to is far far better than our prototype.

Technical

The internal design of the Mastering Buffer BII is all discrete and designed using high speed transistor Class-A technology. All of the components are hand and channel matched with further trimming at the setting stage of the production. This is the only way we can achieve such a tight channel matched phase response and channel tracking response.

Apart from the 2 bespoke high current low noise power transformers - one for each channel, the Mastering Buffer BII incorporates a new power supply configuration which enables the circuitry to occupy the same case as the transformer without the need of a separate box. This means the high speed critical electronics can now utilise the ultra stable, low noise and high speed power source in an instant - no delay lines - just ultra low noise/ high current on tap! This translates into the type of noise floor that is required for extracting large amounts of micro detail, far better image stability and soundstaging which allows you to get closer to the recorded performance.

The Mastering Buffer Series does not represent any significant loading characteristics on the CD/ Streamer output stage or interconnect so this last stage in the source device can work 'uninhibited'. With this in mind the Mastering Buffer BII can then do all of the work adding current drive, allowing high levels of dynamic contrast to feed through and resolve the smaller details to be heard properly during louder musical passages. ALL this while resolving more in the soundstage.

Safety

Place your unit on a firm level surface where it is not exposed to dripping or splashing of any liquid. Position it away from radiators and other heat sources and leave a space of at least 5cms around the unit for ventilation.

Please note that there are **no user serviceable parts inside**.

In the unlikely event that this unit needs to be serviced please return it to an authorised Whest Audio service agent.

There is a risk of electrical shock if this unit is opened!

Please do not attempt to open this unit for servicing or modification unless authorised as it **WILL** invalidate your warranty.

Cleaning

When cleaning the unit please do not use any liquids as it may enter the unit causing it to malfunction. We recommend applying a **very** small amount of engineering oil such as WD40® to a lint free cloth to periodically clean the unit.

Connections

Please read the safety section before connecting your unit.

Before connecting to the mains, check that the mains supply voltage corresponds to the voltage printed next to the power inlet. If the mains voltage is different, please consult your authorised Whest Audio dealer.

All Mastering Buffer BII units come supplied with an audiophile grade interconnect.

Although all listening tests were conducted with this interconnect please feel free to use your preferred interconnect or ask your dealer for advice.

1. When connecting the Mastering Buffer BII please make sure that your system has been switched OFF and the Mastering Buffer BII is also OFF.
2. **Please make sure that the Mastering Buffer BII is connected to a switched wall socket or similar switched socket using an appropriate power lead and is in the OFF position.**
3. **First switch off your CD player or steamer and disconnect it** from the amplifier/preamplifier or other product.
4. Connect the Mastering buffer BII audio interconnect to the CD player/ streamer observing the colour codes for channel ID. (white = **L**eft, red = **R**ight). Next connect the power cable to the switched wall outlet.
5. Connect the output of the Mastering Buffer BII to the amplifier/preamplifier Line /CD or aux input.
7. Once you are happy that all inputs and outputs have been connected properly, switch the power on- on the wall socket and then switch the Mastering Buffer BII via the rear panel on/off switch located next to the power inlet.

8. If all is OK then 2 small RED LEDs will glow on the front panel of the Mastering Buffer BII – this indicates that the Left and Right channels are both OK.

10. Select the correct source input on the amplifier/preamplifier.

11. You are now ready to enjoy, so, play a CD or digital file, sit back and enjoy.

It may take several hours to several days before the Mastering Buffer BII Class-A stages to settle down to work efficiently, but generally 48 hours is sufficient time for the sensitive components to find their 'steady state' working temperature.

The Mastering Buffer BII has been designed to simply integrate into any audio or computer based system.

Please familiarise yourself with the rear panel layout **Fig. 1** as it will make connecting, unplugging and cleaning easier. For basic connectivity follow **Fig. 2**.

Connecting to a computer soundcard for transferring to hard-drive

The Mastering Buffer BII can be connected to your computer sound card analogue audio input or a separate digital recorder using the 1st or 2nd analog output at the same time as being connected to your main system. This allows you to monitor your audio signal while recording OR send a separate high resolution feed to another device.

Technical specification

Model No.:	Mastering Buffer BII dual mono final output
Frequency response:	5Hz – 385Khz +/- 0.1dB
Working band:	5Hz – 205Khz
THD+N:	0.002%
Operating class	Class-A for all discrete stages
Nr of power transformers	2x bespoke and ultra low noise
Connections:	Unbalanced RCA, Balanced outputs on 3XLR
XLR wiring	AES standard Pin 2 Hot, Pin 1 Chassis, Pin 3 Z-matched
Connectors:	Gold Audiophile RCA
Unpacked weight:	5Kgs
Packed weight:	6.8Kgs
Dimensions:	1 x 430mm x 270mm x 70mm
Operating voltage:	230VAC 50Hz or 115VAC 60Hz (see dealer)
EMC and RFI:	meets BS EN 61000-6-3, BS EN 61000-6-1
General Safety CE:	meets BS EN 60335-1 RoHS Compliant

Supplied in package:

- 1 x Mastering Buffer BII final output device
- 1 x Audiophile RCA interconnect
- 1 x IEC power cable or power cable for your country

Warranty

All Whest Audio products are covered by a limited warranty against defects in design, materials and workmanship for a period of FIVE (5) years from the original date of purchase to the **original purchaser only**. This warranty is **ONLY** available upon proper **registration of ownership** within thirty (30) days of first purchase.

Proper registration is made by filling out and returning the attached warranty registration card along with a **copy of the original sales receipt** as proof of the original date of purchase - or emailing the above to whestworld@fastmail.fm

If during the warranty period this product fails to operate *under normal use and service due to defects in design*, materials or workmanship, Whest Audio will, at their option, either repair or replace the product in accordance with the terms and conditions stipulated herein.

Whest Audio reserves the right to charge a handling fee if a returned product is found to be not under warranty, according to the conditions below.

Warranty Conditions

1. This limited warranty is valid only if proper registration of this product is made in the way described above.
2. If Whest Audio repairs or replaces the product, the repair for the defect concerned, or the replaced product shall be warranted for the remaining time of the original warranty or for ninety (90) days from the date of repair, whichever is longer.
3. This warranty does not cover any failure of the product due to normal wear and tear, or due to misuse, including but not limited to use in other than the normal and customary manner, in accordance with the Whest Audio instruction for use and maintenance of the product. Nor does this warranty cover any failure of the product due to accident, modification or adjustment, acts of God or damage resulting from liquid.
4. This warranty does not cover product failures caused by modification or repair of the product performed by a non-Whest Audio authorised person.
5. In no event will Whest Audio Limited be liable for incidental or consequential damages of any nature whatsoever arising from purchase, use or inability to use this product.

6. There are no express warranties, whether written or oral, other than this printed limited warranty. All implied warranties, including without limitation the implied warranties of merchantability or fitness for a particular purpose are limited to the duration of this limited warranty.

The warranty does not affect the consumer's statutory rights under applicable legislation in force.

Please complete the Warranty Registration Card and send it together with a copy of the original sales receipt to:

**WHEST AUDIO LIMITED
WARRANTY REGISTRATION DEPARTMENT
Q West Suite 2.07
1100 Great West Road
LONDON TW8 0GP**

For our records:

Model**Mastering Buffer BII** **Colour**.....
Serial No.
Purchase Date
Supplier

For your records

Model**Mastering Buffer BII**.....**Colour**.....

Serial No.

Purchase Date

Supplier