

# XPSound

**XP203 Operating Manual V1.0**

**Date: 18.9.2008**

**Multi-purpose Phono/Line pre-amp audiophile media enhancer**

## **Foreward**

Thank you very much for expressing your confidence in XPSound products by purchasing the XPSound XP203. The new "XP203" provides a combination of hard and software to achieve high quality transfer of old records and cassettes to your home PC in addition to offering a high quality headphone amplifier. The included software "*Diamond Cut 32*" (PC) and the "*Audacity*" (mac and Pc) allows users to professionally edit their recorded audio.

Because record players, tape recorders and many other devices operate at differing audio levels, a phono/line pre-amp like the "XP203" is required to match levels. The built in RIAA equalizer guarantees perfect processing of the incoming pick-up signals from your turn-table and provides users an unmatched listening experience. An adjustable pre-amp allows users to connect and record high quality signals directly to their PC. As an added bonus, a stereo headphone power-amp is accessible from the front panel.

The USB interface in the "XP203" allows for easy connectivity to any computer which has a compatible USB interface.

With much experience in the audio industry over a long period of time, and along with valuable suggestions from our customers, our engineers have developed a product we know you will be satisfied with. We guarantee you uncompromising quality as well as excellent technical and audio properties at an extremely affordable price. We know you will enjoy all the features your new "XP203" will provide.

Thank you ...and enjoy!

The XPSound Team

## CONTENTS:

- ❖ 1 x "XP203" Unit
- ❖ 1 x USB cable
- ❖ 1 x CD Containing the following software and corresponding manuals:
  - 1 x Copy of "Diamond Cut 32 V.4.0" Software – Full Version
  - 1 x Copy of "Dart Karaoke Studio" Software – Full Version
  - 1 x Copy of "Dart CD Recorder" Software – Full Version
  - 1 x Copy of "Rip, Edit, Burn" – 30 day limited version
  - 1 x Copy of "Audacity XPSOUND" recording software
  - 1 x Copy of Each Manual in PDF file format

## Safety Instructions

### Warning:

To reduce the risk of fire or electrical shock do not expose this appliance to rain or moisture.

### Detailed Safety Instructions:

All safety and operation instructions of this manual should be read and adhered to before operation.

### Retain Instructions:

Please retain all safety and operating instructions for future reference.

### Follow instructions:

All operation and user instructions should be followed.

### Water, liquid and Moisture:

The appliance should not be used near water, rain or other liquids. Make sure that no liquid can leak, spill or otherwise seep into the appliance.

### Heat:

The appliance should be situated away from other heat sources such as heaters, radiators, ovens, or other appliances that produce heat.

### Power-Cord Protection:

Power supply cords should be routed so that they are not likely to be walked on, pinched, damaged, worn, or rubbed by any other device or obstacle.

### Cleaning:

The appliance should be cleaned only with a light soft cloth. Do not use any damaging or corrosive products on the unit.

### Periods of inactivity:

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

### Damage Requiring Service:

The appliance should be serviced by qualified service personnel when:

- The power supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure damaged.

### Servicing:

The user should not attempt to service the appliance beyond that is described in the Operating Instructions. All other servicing should be referred to qualified service personnel.

## The Concept

Although the XP203 includes an extremely handy preamp and headphone amplifier, its main application and purpose is that of a high quality phono preamp.

In recent years with CD's taking over from vinyl records as the preferred format for music, many fans of records have been searching for a way to preserve their favorite collections and transfer them to the CD digital format. CD's have become so common that it is now a very simple process to create them in the privacy and comfort of your own home.

With the correct connections and suitable recording and restoration software like those provided by the XPSound XP203 and "*Diamond Cut 32*", users can now enjoy their music in pristine CD quality.

Traditionally, a computers soundcard alone is not up to the task of directly connecting turntables to record and transfer your audio with an acceptable level of quality. This is where a preamp like the XP203 comes into its own.

In the case of a record player, the output signal cannot be directly used by sound cards. It cannot even connect to a line input device. A special preamp is required to strengthen the record player's signal and convert it into a high-quality signal the sound card can use. Without the preamp, signals would be extremely low, noisy and completely unusable.

A good phone preamp will offer RIAA equalization. All turn-table needles pickup limited frequencies that are "out of balance". High frequencies are accentuated, and low frequencies are not. Because of this the pickup signal has to be prepared (equalized) before it can be used in an acceptable fashion. To make this equalization process smooth between various and differing brands of turn-tables, a set of world wide standards has been developed by the "Recording Industry Association of America" (RIAA).

The process of actually transferring your vinyl albums is quite simple after you have made the necessary physical connections. Play your records and use the recording software included to capture your audio digitally to your computer. Once captured, you may decide you would like to edit your recordings. This is where you can do some fantastic things with your software to help restore your original recordings to previous glory. You may wish to remove clicks & pops, scratch noise from your vinyl, crackles & electrical hum. This is all made possible with the famous software "*Diamond Cut 32*" included.

After the preparation of recording and restoring your audio, the last step is to burn your CD. Use the "Dart CD Recorder" software that is included in this package, to transfer your newly recorded audio to pristine quality CD. You can now playback in your car, home stereo unit, computer, or any other normal audio CD player!!

# Connection & Operation

## FRONT PANEL

All the connections on the front panel are provided for integrating your external devices like turn-tables, cassette players, tape decks, microphones, headphones etc.



### 1. Phono/Line switch selector (white selector switch)

Select between RIAA EQ (for turn tables) or Standard Line level input

### 2. Gain (input Control Knob)

This control knob will allow you to set an optimum level for audio input from signals connected to the input. Turn clockwise to increase gain.

### 3. Peak (Indicator Light)

This indicator will light up if your audio levels are overloaded. This may mean that you will be hearing distorted sounds. If this happens, turn the Gain Control Knob counter-clockwise to decrease this audio level.

### 4. Signal LED (Green)

This indicator will light up when audio level is present.

### 5. Volume (Control Knob)

This control knob is provided so you can set a suitable listening (volume) level for your Headphone. Rotate clockwise to increase the volume or counter-clockwise to decrease the volume .

## **6. Headphone (Headphone Output Connector)**

This is where you plug in your headphones. You are able to listen to all audio passing into the unit from your PC in addition to the inputs on the XP203 (Line/guitar/Phono) you are using. By default, the headphone amplifier is set to amplify the signal coming from your computer. Any audio playing back from your computer software or being recorded to your PC can be monitored through your headphones.

## REAR PANEL

These inputs and outputs are how your XP203 connects easily to your computer's soundcard. With just two cables (included) you can simply make the connections required to interface the XP203 into your computer setup.



### 7. Stereo RCA line inputs

Connect the standard stereo RCA connections (red=Right Channel, white=Left Channel) to the XP203 unit.

Connect this cable to The device you want to record from, LINE or PHONO (turn table)

The included Ground screw may be used for Turn Table (PHONO) Earth / Ground cable

What is an Earth Loop?

An earth loop occurs when a device, such as a Turn Table(Phono) or keyboard, is connected to the mains earth via more than one path. The first path is via the instrument's own power cable to the mains earth. The second path is via the interconnecting audio cable to the sound system (your computer), then via the sound system's (your computer) power cable to the main's earth. The resultant circulating earth current is amplified and is often heard as a hum or buzz.

Important note: Disconnecting the signal (audio) earth is not a safety issue, as the Protective Earths in all the mains cables are still connected and fully functional.

## **8. Stereo RCA line outputs**

Connect the standard stereo RCA connections (red=Right Channel, white=Left Channel) to the XP203 unit.

Connect this cable to your powered speakers or mixer.

## **9. DC 5v Power Input connector**

This is where you can connect an external power supply if desired.

## **10. USB connector**

This is where the USB cable connects to your computer (supplied cable)

## **Power connection options**

Power to the XP203 can be supplied in numerous different ways. This makes the unit extremely versatile for many different applications. It is your choice as to which option is best suited to your needs.

1. The XP203 can be powered off USB powered from your computer.
2. The XP203 can be powered from an external power supply (wall socket adaptor). On the rear of the unit is a standard power adaptor input socket. This is where you can connect a standard DC 5V 250ma power adaptor to your mains power supply wall connection.

## Installing the XP203

The XP203 is one of the simplest devices to install, it does not require any drivers using any current up to date operating systems it will be detected automatically when connected to your USB port.

Power your Computer,  
Connect one side of the USB cable to the XP203  
Connect the other side to a free USB port on your computer  
Let the XP203 be detected and installed.

You should now have successfully installed the XP203

## Technical Specifications

- Stereo Phono/Line (switchable) input for turn-table or line input (RCA)
- Adjustable gain (-24dB-45dB) preamp with peak indicator light and earth lift switch
- Stereo input for sound card connection (RCA)
- Stereo output for sound card connection (RCA)
- Adjustable gain headphone amplifier
- Filter function with highly-accurate RIAA equalizer curve (20 Hz-20 kHz /  $\pm$  0.5 dB)
- Distortion factor < 0.002 % (5 mV)
- Signal-to-noise ratio: >86 dB (A)
- Shielded case

## Software Operational Instructions

Please note: Further more detailed operational instructions for the included software can be found in electronic form (PDF) on your software CD.

Please refer to this manual to learn how to record your audio successfully.

Once you have connected the "XP203" unit to your computer, then you are now ready to restore an LP to CD. The general steps are as follows. Please keep in mind that any of the filters may be skipped if the particular recording does not suffer from the kind of noise the filter is designed for. You should always use the least amount of processing that will get the job done!

### 1. RECORD THE SOURCE MATERIAL

The source material is recorded from an external source into a wave file using the Record function of DC Art 32 V.4.0.

### 2. DE-CLICK

The Impulse Noise Filter is used to remove clicks, ticks, pops, and other transient noises from the recording.

### 3. DEHISS

You can use either the Continuous Noise Filter or the Dynamic Noise Filter to remove constant background hiss or other wideband noise from a recording. This type of noise is the most difficult to remove without effecting the music.

4. FILTER (hp, lp, Notch, Harmonic Reject, Equalizer)

The High Pass, Low Pass, Notch, Harmonic Reject, and Equalizer are all filters that modify the frequency response of the recording.

Examples:

- High Pass filter for removing rumble
- Notch or Harmonic Reject filter for removing hums, buzzes or feedback
- Equalizer for adding bass or emphasizing the vocal range

5. TRIM, FADE-IN/FADE-OUT

After the processing is done and you are satisfied with the results, you can use the Cut, Fade-In and Fade-Out functions to remove any noise that occurs before and after the recording, such as the sound of the record needle being dropped on the lead-in groove. Keep in mind that the Cut and Fade functions operate on the selected file. This means that unlike other filters, you can modify the source file if you want to.

6. TRANSFER TO FINAL FORMAT (CD, Cassette, DAT)

After the restoration process has been completed the file should be transferred to a portable format such as CD, cassette or DAT.

If transferring the file to CD, then use the enclosed software, "Dart CD Recorder".

If transferring to a cassette or DAT, simply set up the cassette or DAT machine to record from the computers sound card and play the wave file. If you are restoring an entire album or want to create a master tape, use the *Playlist* feature.

This allows you to create a list of wave files and play them back in sequence, thus eliminating the time consuming steps of starting and stopping the recorder between each song.

## **WARRANTY**

### **WARRANTY CARD**

To be protected by this warranty, the buyer must complete and return the enclosed warranty card (signed/stamped by retail dealer) within 14 days of the date of purchase to XPSound (see address below ). Failure to return the card in due time (date as per postmark) will void any extended warranty claims.

### **WARRANTY**

1. XPSound warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year from the original date of purchase, in accordance with the warranty regulations described below. If any defects occur within the specified warranty period that are not caused by normal wear or inappropriate use, XPSound shall, at its sole discretion, either repair or replace the product.
2. If the warranty claim proves to be justified, the product will be returned freight prepaid by XPSound within Australia. Outside of Australia, the product will be returned at the buyer's expense.
3. Warranty claims other than those indicated above are expressly excluded.

### **RETURN AUTHORIZATION NUMBER**

1. To obtain warranty service, the buyer must call XPSound during normal business hours BEFORE returning the product (Tel.: +61 3 9528 5744). All inquiries must be accompanied by a description of the problem. XPSound will then issue a return authorization number.
2. The product must be returned in its original shipping carton, together with the return authorization number, to the following address:

XPSound Service Department  
Warehouse 25, 26 Roberna street, Moorabbin  
Melbourne, Victoria  
Australia 3189

### **WARRANTY REGULATIONS**

1. Warranty services will be furnished only if the product is accompanied by an original retail dealer's invoice. Any product deemed eligible for repair or replacement by XPSound under the terms of this warranty will be repaired or replaced within 30 days of receipt of the product at XPSound.
2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, XPSound shall not be held responsible for any cost resulting from such a modification/adaptation.
3. Free inspections, maintenance/repair work and replacement of parts are expressly excluded from this warranty, in particular if caused by inappropriate use. Likewise,

the warranty does not cover defects of expendable parts caused by normal wear of the product. Expendable parts are typically pots, potentiometers, switches and similar components.

4. Damages/defects caused by the following conditions are not covered by this warranty:
  - Misuse, neglect or failure to operate the unit in compliance with the instructions given in the user or service manuals.
  - Connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
  - Damages/defects that are caused by any other condition beyond the control of XPSound.
5. Any repair carried out by unauthorized personnel will void the warranty.
6. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. XPSound will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 4 weeks after notification, XPSound will return the unit C.O.D. with a separate invoice for freight and packing. Such cost will also be invoiced separately when the buyer has sent in a written repair order.

#### **WARRANTY TRANSFERABILITY**

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of XPSound.

#### **CLAIM FOR DAMAGES**

Failure of XPSound to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of XPSound exceed the invoiced value of the product.

#### **OTHER WARRANTY RIGHTS**

This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract. The information contained in this manual is subject to change without notice. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording of any kind, for any purpose, without the express written permission of XPSound.

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## Diamond Cut 32 V.4.0

The World's Best Noise Reduction Software!!

Diamond Cut removes as much noise as possible while doing as little damage to the remaining source as possible and enhances the remains so they sound as close to "good as new" as possible!

Essentially DC-ART is a series of audio frequency filters consisting of impulse, dynamic and continuous noise filters, low-pass, high-pass, median, average, harmonic rejection and notch filters incorporated in a familiar Windows interface. In addition, a ten-band graphic equalizer, reverb, change speed and file conversion utilities are included. These filters allow you to remove hiss, crackle, pops, heterodynes, whistles, clicks from your source material, whether its vinyl records, cylinders or magnetic tape recordings. DC-ART can even clean up taped telephone conversations!

Features:

- 32 Bit Processing Power for better accuracy
- HQ Power Declick added to the Impulse Noise Filter
- New "Enhancer" mode added to Dynamic Noise Filter
- Support for ME, 2K, XP, NT and all 95-98 versions
- Drop Markers *on the fly*
- Punch and Crunch Dynamic Expander and Compressor
- New Output VU metering for more accurate monitoring
- New Faster Display Rate

\*\*\*Full manual in PDF file format on CD enclosed in package

## Dart Karaoke Studio

Create your own customized Karaoke songs!!

Now you can use your favorite CDs and MP3 files, remove the vocals, (from most of them) and record your own voice over the music bed. With Dart Karaoke Studio, you can make original recordings of yourself singing with all of your favorites!  
Compatible with Windows 95, 98, 98SE, ME, NT, 2000 and XP.

Features:

- Remove vocals from most of your favorite tunes!
- Synchronize Lyrics and Music
- Allow Full Screen Karaoke playback display
- Record Your Performance

\*\*\*Full manual in PDF file format on CD enclosed in package

## Dart CD Recorder IV

Make CDs from records, tapes, MP3s, MIDI Files and Pre-Recorded CDs!!

Now there's an easy way to make your own original audio CDs from virtually any source. CD Recorder IV allows you to drag any MP3, MIDI, WAV, or even direct CD files right onto the CD and create your original disc with the click of a mouse. Got a little noise in your older stuff? CD Recorder IV also includes direct X DENOISE, DEHISS, and DECLICK plug ins to make your old stuff sound as good as possible.

Audio Restoration Functions:

- Declick: Removes pops, clicks and scratches
- Dehiss: Removes tape his and wideband noise
- Automatic audio sample rate conversion to 44.1 kHz CD quality

CD-R Recording Features:

- Supports most SCSI and EIDE CD-ROM, CD-R and CD-RW devices
- List controls – lift tracks, add delete, rename, move, play, pause, loop etc.
- CD controls – set gap times, CD-R device selection and write simulate
- Automatic CD formatting and conversion to standard Redbook CD
- Extract audio files from existing CDs
- Render MIDI files with an all-digital process
- Record MP3 files to CD

Other Special Features:

- Use the Radio Timer to automatically record broadcasts. It works like a VCR for your radio! Covert mono audio files to stereo
- Need Help? Just press F1 for context sensitive assistance
- Even more help available on an included 20 minute multimedia tutorial
- CD Recorder works with any analog or digital sound card

DirectX Plug-ins

- Full Microsoft Active Movie/DirectX plug-in support
- Includes 5 DirectX plug-ins
- DeClick
- DeHiss
- CD-Format
- TrimLength
- Resample

Requirements:

- Pentium Class PC
- Microsoft Win 95, 98, 98SE, ME, NT, 2000 and XP.
- At least 16 megs Ram
- 1.2 gigs free hard drive space
- 16 bit sound card
- CD-ROM drive or SCSI, EIDE CD-R or CD-RW drive (if you want to burn audio CDs)

\*\*\*Full manual in PDF file format on CD enclosed in package

## **Rip Edit Burn**

Rip, Edit, and Burn. The ability to rip tracks from music CDs, convert them to and from MP3, edit them, and burn them onto custom music CDs. This is one program that does all of these things easily and quickly!!

RipEditBurn is totally integrated and easy-to-use, shortening your learning curve and making it as easy as possible to manage and manipulate your music collection. Some of the great features include: fade, equalization, volume normalization, special effects and more. Even if you've never burned a CD before, it is easy to learn. There is a Tutorials section with step-by-step instructions for converting your tapes and records to CD, creating mix CDs, and more. If you've just joined the computer audio world, you can learn the basics at the Beginner's Starting Point. Rip Edit Burn will have you dancing to your own custom music CDs in no time!

\*\*\* Thirty Day Free Trial

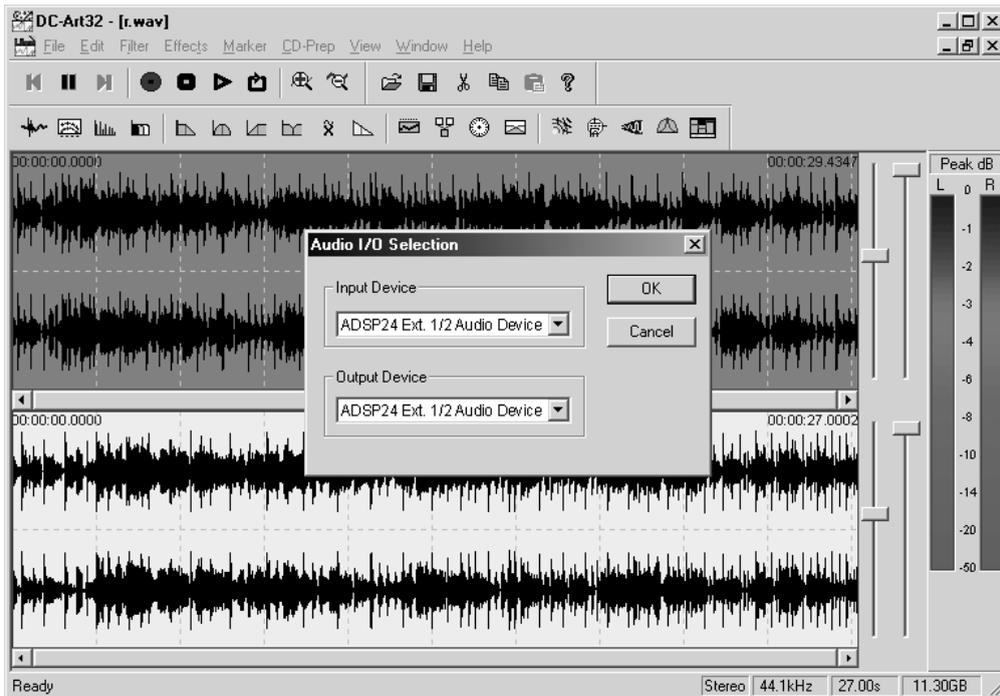
\*\*\*Full manual in PDF file format on CD enclosed in package

## Setting up DCart32 V4

DCart32 V4 (Diamond Cut) is included with the XPSOUND XP203. It is an extremely powerful tool that allows you to restore any audio recording (tape, vinyl, etc.) with great results.

You can find the software on the included software and driver CD-ROM in the `\software\dcart32` directory. To install it, launch `SETUP.EXE` from this directory and follow the instructions on screen.

Once the software has been installed, launch it in order to change the default configuration. Select `Edit > Device IO Selection` from the menu.



To get more informations about the powerful functions of the DCart32 V4 software, please read the online documentation that will be automatically installed on your harddisk.

## Setting up DART Karaoke Studio

The XPSOUND XP203 is shipped with DART Karaoke Studio – a powerful software that allows you to remove the vocals from WAV- or MP3-files to turn them into background-karaoke versions. Also it allows to you to synchronize text-versions of the lyrics and music and provides functions to allow full screen playback of the song with the lyrics.



You can find the software on the included software and driver CD-ROM in the software\karaoke directory. To install it, launch *SETUP.EXE* from this directory and follow the instructions on screen.

DART Karaoke Studio uses the default playback and recording audio devices from Windows.

## Setting up DART CD Recorder Basic 4.1

DART CD Recorder Basic 4.1 provides a easy way to make your own original audio CDs from virtually any source. The CD Recorder allows you to drag any MP3, MIDI or WAV files right onto the CD and create your original audio disc with the click of a mouse. DART CD Recorder Basic is shipped together with the XPSOUND XP203.



There is no separate installation method for DART CD Recorder Basic 4.1: the software is automatically installed when you install DART Karaoke Studio (check the previous section for more details). Once the software has been installed, you can access the documentation for it via the menu inside the software. Just select *Help > Contents*.