# DJPAD2020
# User's  Guide

April  2001

# SoundGraph.,  Inc.

# Table of Contents

## User's Guide

## Appendix

## User's Guide

## 1. Introduction

  DJPAD2020 is the innovative product and the only solution that can make real time scratch and create your own mixing by using two digital audio files (MP3, CD, and Wave).    This product consists of the powerful S/W and the unique H/W which have been developed in SoundGraph, Inc.    The H/W is composed of **Touch Pad** which generates the control information about the speed and direction of the digital audio like the spinning of LP record on the turntable and **Volume Slider** which controls many volume sliders in DJPAD2020 S/W and even acts as a cross-fader.

  Because the digital audio control engine of DJPAD2020 is built as a S/W in the PC, DJPAD2020 has the variable utilities for DJs.    The important and innovative features of DJPAD2020 are as follows.

- ● S/W Dual Audio Player (MP3, CD, Wave)
- ● Pitch Controller (50% ~ 150%)
- ● Auto / Manual Cross Fading
- ● CUE Inserting / Detailed Editing
- ● Edit / Save Play List
- ● BPM Calculation / BPM Adjustment
- ● Record of Remix
- ● Digital Audio Scratch (MP3, CD, Wave)
- ● Insert Effect Sound
- ● Insert Drum Loop Pattern
- ● Change EQ / Reverb
- ● Available Monitor function with 3D Sound Card

## 2. Installation of DJPAD2020 S/W :

DJPAD2020 S/W installation is made up of H/W drivers, DJPAD2020 S/W, and Microsoft DirectX 8.0.   Firstly, users must install the H/W drivers and S/W using the "setup.exe" file in your installation CD according to your Window version.   It will ask you if you would like to install DirectX 8.0 of your language.   Users should make the Windows rebooting after the DirectX8.0 setup.   The installation method follows the standard Windows installation procedure.
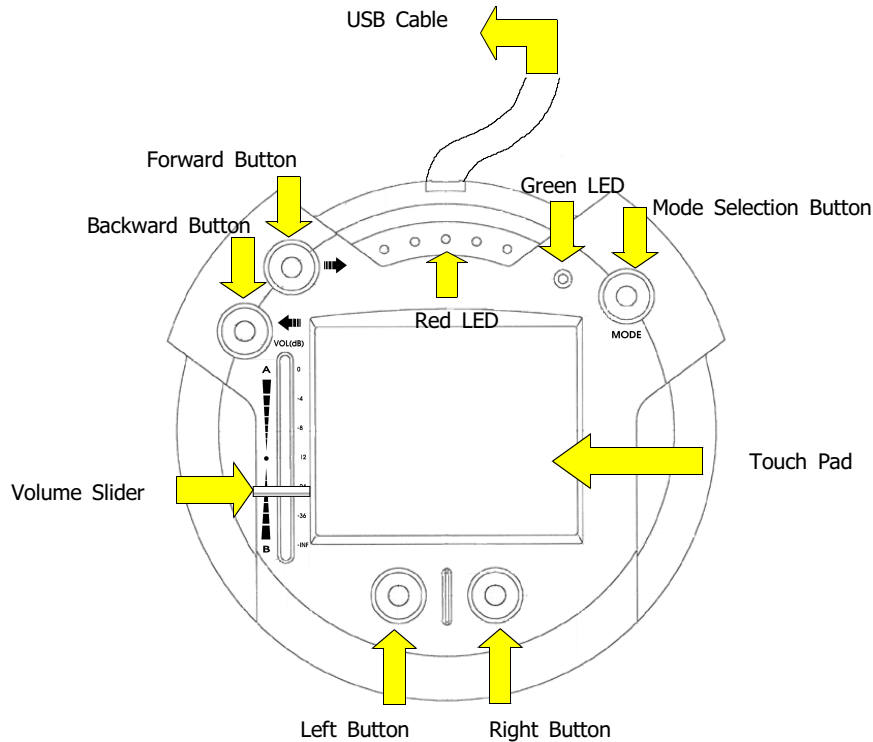
## 3. Installation of H/W

DJPAD H/W uses the USB connection which is easy to use and connect. Just plug the USB connector into the USB port in your PC after the installation the S/W, DirectX8.0 and rebooting the Windows. Now you are ready to play and enjoy the DJPAD2020!!

<Warning!> If you connect the USB Connector of H/W first before you install S/W, there will be the message in your PC about searching the driver for the new hardware. In this case, you should select the folder "Drivers" in the installation CD. Then, you can install the S/W. **However, please try to install the S/W first!!**

# 4. Part of DJPAD2020 H/W :



USB Cable

Forward Button

Backward Button

Green LED

Mode Selection Button

Red LED

MODE

VOL(dB)

Touch Pad

Volume Slider

Left Button    Right Button

(Fig. 1) Parts in H/W

### 4.1 Touch Pad

The DJPAD2020 H/W uses the touch pad in order to make the digital audio scratch signal and this pad works like a touch pad in a normal laptop computer.   So, users can use DJPAD2020 H/W as a substitution for the mouse and they can make click, double click, drag and drop like a mouse.   Touch-pad in DJPAD2020 H/W comes from Synaptics, Inc. who is the most famous touch pad manufacturer in the world and it is the key input device of DJPAD2020.

It works as a pointing device not only in DJPAD2020 S/W but also in other Windows programs.   It can work with the other pointing device in Windows and will not cause the conflict problem.   However, the special functions in DJPAD2020 - Scratch and Effect sound - can be controlled only by the Touch Pad in H/W.   So, we would like to recommend you to use Touch Pad all the time because it controls all the functions in S/W including the pointing device function same as a function in a mouse.

If users do not have a experience of using touch pad, the users may need some practice of using the touch pad.　DJPAD2020 S/W can get the information of control signals from the pad under the Absolute Mode.　The speed and the direction of the finger movement control the playing of digital audio signal directly using the powerful solution - **DASA**　(Digital Audio Scratch Algorithm by SoundGraph).　Touch pad also works as a electric trigger in the effect pad mode.　It produces the nine different wave sounds (ready-made and user-editable) on the each of 9 sectors in the pad when you tap on the pad.　Scratch and Effect functions is only available under the Absolute Mode and it will be explained with details later in the chapter 4.4 Mode Selection Button.

### 4.2 Green LED

The green LED at the left of the mode selection button indicates the connection status of the DJPAD2020 H/W into the PC.　If there is no light from LED, the connection may be broken, so please check the connection of the USB cable.

It might be happened very rarely that DJPAD2020 H/W cannot recognize your PC when you use a additional USB hub.　In this case, you can pull out and connect it again or connect DJPAD2020 to the USB port in your PC directly.　There will be no problem.

### 4.3 Red LED in the Black Status Window

There is a black status window in the top of the DJPAD2020 H/W.　It gives the information of the status of DJPAD2020 H/W by the lights of the five red LED elements.

To startup, when you plug the USB connector into the PC, 2nd and 4th LEDs from the left will be lighted. These two LEDs indicates the mode status of the touch pad.　The status of two LED lights on indicates that the touch pad is under the Relative Mode.　If just one of five LED is on, and if five LEDs are lighting as a flow when you move your finger on the touch pad, it indicates the status of Absolute Mode.

### 4.4 Mode Selection Button

Touch pad in DJPAD2020 H/W works under the two different modes - one is Relative Mode and another is Absolute Mode.

Absolute Mode is used only for the special functions in the DJPAD2020 program. Users can change the status of the touch pad - Relative Mode & Absolute Mode - just by pushing the mode selection button in the right-upper part of the touch pad.　Users can see just one red LED light on in the black status windows of the DJPAD2020 H/W

under Absolute Mode and the mouse cursor would disappear in your Window.     Under Absolute Mode, the touch pad works as a scratch and effect pad which performs the special function of our S/W.

The DAJPAD2020 can work with the other input devices like mouse under Relative Mode.     However, users may see some unnatural action of the cursor when you use the mouse in other Window program under Absolute Mode, so do not go into Absolute Mode except when you perform scratch or effect pad.     We recommend that users do not use DJAPD2020 H/W as a mouse under Absolute Mode.
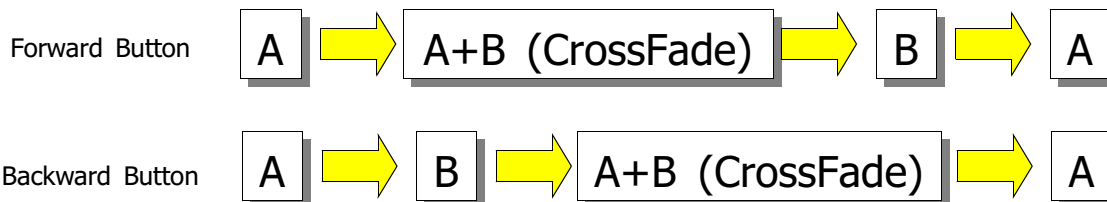
### 4.5 Forward/Backward(Virtual Turntables Selection) Button

DJPAD2020 S/W can play the two tracks at the same time like playing the two LP turntables.     But DJPAD2020 H/W has just one control unit because DJPAD2020 H/W can switch between two tracks using these two Forward/Backward buttons.

For example, each virtual track has its own volume parameters and users can control the each volume separately using these two buttons.     So, if you choose one of the virtual turn tables, the volume slider of the chosen turn table is activated automatically.

And these two buttons can assign the 2 virtual tracks volume parameter in the cross-fade mode.     Using these two buttons, the control of the track volume changes among turn table A, turn table B and cross-fade mode as follows.     In this Cross-Fade state, you can control the volumes of 2 turntables at the same time according to the volume graph in Cross-Fader.     You can see more detail explanation in the chapter **6.1 Playlist.**

Forward  Button    A ⟹ A+B (CrossFade) ⟹ B ⟹ A

Backward  Button    A ⟹ B ⟹ A+B (CrossFade) ⟹ A

(Fig. 2) Virtual Turntable Window

Of course users can access all the parameters directly using the cursor.     However, you will be more comfortable and faster to control the turntables after some experience of using these buttons.

Furthermore, DJPAD2020 H/W provides the convenience in making backward/forward in the Internet Explorer like the Microsoft Optical Mouse when users enjoy the web-surfing with these two buttons.    More detailed instruction about the usage of DJPAD2020 H/W as a mouse in the Windows is in the Appendix 1. When Using DJPAD2020 H/W with the other programs as a mouse

### 4.6 Left/Right Mouse Button

Under Relative Mode of the touch pad, these two buttons work as the left and right button same as in a mouse.

### 4.7 Volume Slider

In the DJing scratch, the most important point is the control of the volume of the track. There are so many knobs and sliders in the analog mixer, but DJPAD2020 H/W uses the only one slider.    It can control not only the volume of the each track and the cross-fading between two tracks but also the whole parameters of all sliders in the DJPAD2020 S/W.

When you make a click the knob of the sliders in DJPAD2020 S/W, each knob of the slider will be highlighted, and you can control the slider in S/W using the volume slider in DJPAD2020 H/W.    Of course, you can control the knob of the slider in the DJPAD2020 S/W by the mouse also.    But using volume slider of DJPAD2020 H/W is more convenient and faster than using the mouse dragging.

After the change of the control from one slider to the other, the knob in S/W will move after the knob in H/W passes over the old position of the knob in S/W.    In this way, you can control also all the sliders in the DJAPD2020 S/W just using only one real slider in H/W.

Furthermore, DJPAD2020 H/W provides the convenience in making scroll function using this volume slider.    It supports the same function like the wheel of the mouse.    When users want to scroll over the range that can be covered by the slider in H/W, there is another powerful function in DJPAD2020.    If you put the slider in H/W at the top position and put your finger stationary on the "white hand" of the DJPAD2020 logo in the touch pad, you will see the scroll to the upside.    In the same way with the bottom position of the slider in H/W, the scroll will be done to the downside.
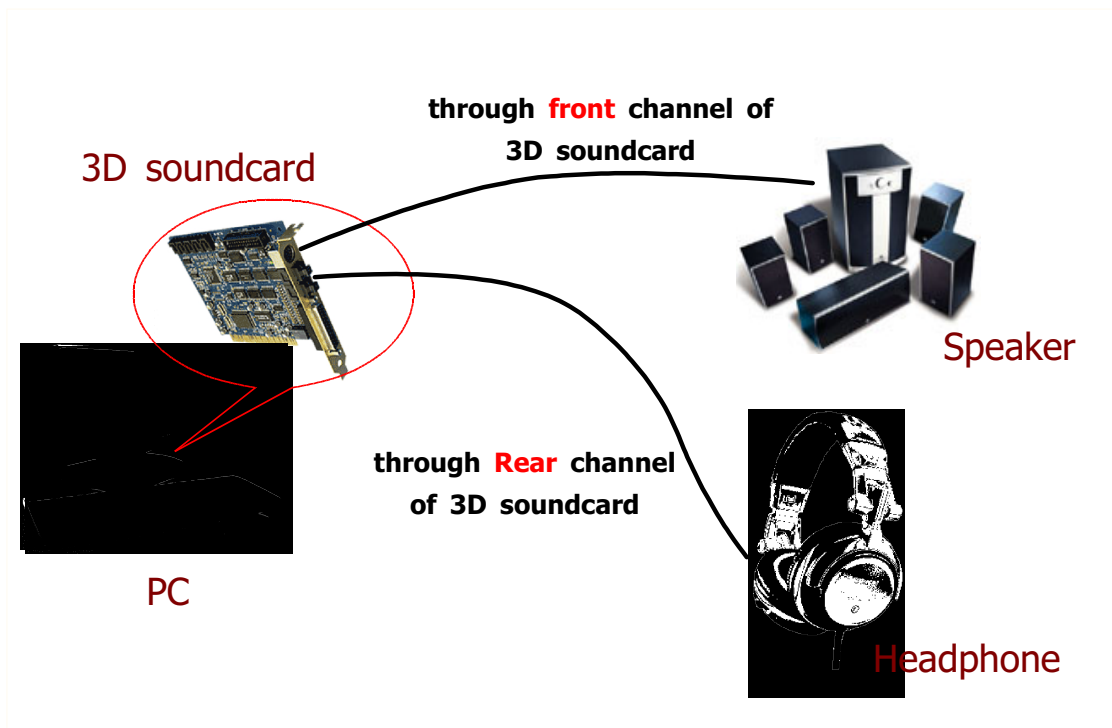
If you push your finger more on the pad at this time, the scroll will be done more

rapidly.

<Notice> When you go to the Absolute Mode after you change the value in the slider, it will be better to double click anywhere in the pad before you change the mode because the volume slider or the cross-fader slider will be activated automatically after the double click.

### 4.8 Channel Routing (Master/Monitor Out)

DJPAD2020 S/W has the successful solution which can make it possible to get the monitor channel for the mixing with one sound card using the powerful 3D audio function of DirectX 8.0.    With this function, users can monitor one song without additional mixer while another song is playing to the stage through the master out.    So in order to make monitor, you must connect the audio line of your speaker and headphone like the below figure.



(Fig. 3) Channel Routing between PC and Speaker/Headphone

When you use DJPAD2020 without using the monitor function, you can just connect directly the front out channel to the analog mixer or the speaker regardless of the above Fig.3.

### 4.9 USB Cable