

Synido



TempoPAD^{P16}

USER MANUAL

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MIDI Controller

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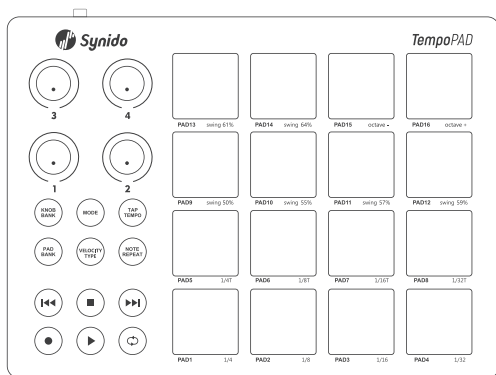
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WELCOME

Thank you for choosing Synido TempoPAD. TempoPAD is an input control device based on MIDI protocol. You can quickly input notes or issue control commands in the DAW with it to improve work efficiency. It is very suitable for music production, DJ and live performance. With the devotion and efforts of our team, it is now a cool product with excellent design and smooth feel. It is worth mentioning that this device only outputs MIDI commands without generating sound signals, so it requires some knowledge of music to use it properly.

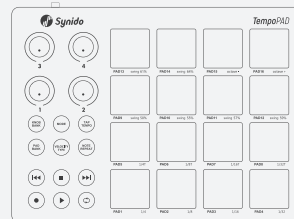


Features:

- 16 velocity-sensing pads with RGB backlight, 2 working modes;
- 6 transport control buttons: fast forward, fast backward, stop, record, play/pause and loop;
- 4 endless rotary encoders which work in 3 groups as 12 controllers. They can generate CC, channel after touch or pitch bend events;
- Multiple ports make it easy to connect computers, mobile phones, tablets and other devices;
- With traditional MIDI output (3.5mm MIDI output);
- The self-contained desktop control software can visually adjust the function distribution on the hardware.

PACKING LIST

x1



TempoPAD P16

x1



USB Cable

x4



1/8" TS to 5 Pin DIN
Female Converter

x1



User Manual

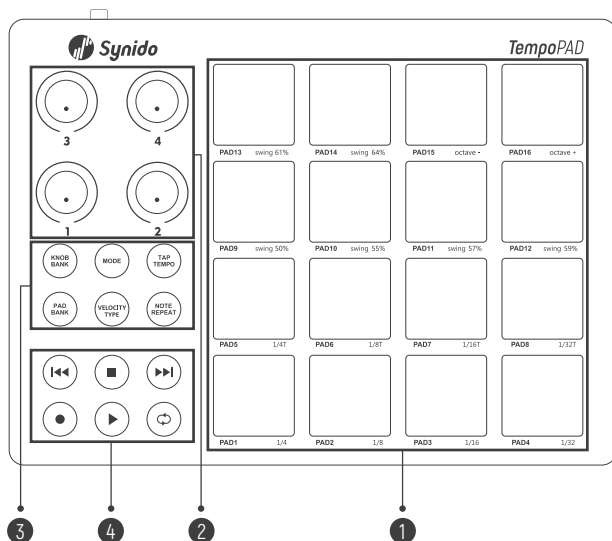
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Certificate of Conformity

PANEL DESCRIPTION

Front Panel:



1. Pad: 16 velocity sensitive pads. Tap the pad(s) to send MIDI commands; The pads work in two modes.

2. Knob: 4 encoders capable of 360 ° free rotation. Rotate the knob(s) to send MIDI commands; The knobs work in three user-defined groups sending 12 kinds of commands.

3. Function Control Button:

Press KNOB BANK button to switch the three knob groups in turn;
Press PAD BANK to switch three pad groups in turn;
Press MODE button to switch the two working modes of the pad;
Press TAP TEMPO button to determine the tempo by tapping;
Press NOTE REPEAT button to activate/deactivate the note repeating function.
Press VELOCITY TYPE button to switch the velocity curve of PAD in turn.

4. Transport Control Button:

Six transport control buttons can send transport commands. The command is sent in CC event or MMC event. You can edit these event through the supporting control software provided with the device.

Back Panel:



1. USB-C Port: Use USB-TYPE-C cable to connect this USB port to your computer or mobile device. The USB port of the computer will provide power for TempoPAD and exchange data with your computer.

2. Power Switch: Turn on and off the device.

3. DC-5V: Power supply port, which provides power only; When TempoPAD connects mobile devices (mobile phones/tablets) through USB-C port, this port can provide additional power through this port to prevent excessive power consumption of mobile devices.

4. MIDI OUT: The 3.5mm socket outputs signal with standard MIDI protocol, and a TS to 5 PIN DIN converter cable is required.

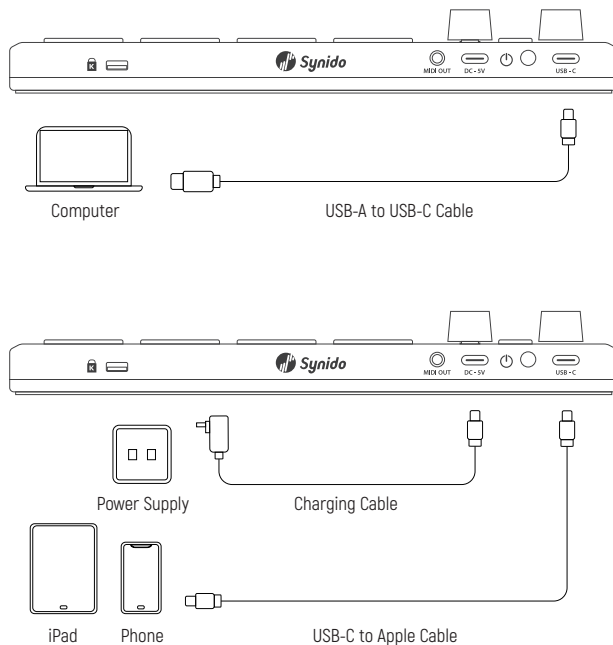
5. Lock Hole: You can use this lock hole to fix TempoPAD on the table or other surfaces.

OPERATING GUIDE

Connections:

The product has two USB-C ports. If you use one only, please use the USB-C port.

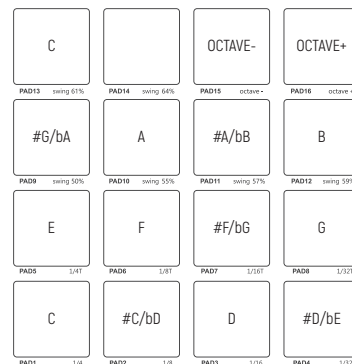
1. Use USB-A to USB-C cable to connect the product to the computer directly;
2. Use USB-C cable to connect to Android phones and other devices;
3. Connect USB-C to Apple cable, and connect it to iPad or iPhone;
4. Connection the DC-5V cable for additional power supply.



PADS:

The pads of Synido TempoPAD work in two modes: key mode and user-defined mode. Press the MODE key to switch modes. The color of the backlight under the MODE key indicates the current mode: red represents the key mode; Green represents user-defined mode.

Key Mode (MODE key light is red): In the key mode, pads work by imitating the piano keys, and by tapping the pads, the device generates NOTE events. By default, tapping PAD1-PAD13 to send 12 semitones from C1-C2 (as shown in the figure). Press PAD15/PAD16 to move up or down octaves. In this mode, the BANK function is disabled.



User-Defined Mode (MODE key light is green): In this mode, the pads generate the NOTE/CC/PC event according to your settings, and the color of the pads can also be customized to your preference. You can edit 3 user-defined groups and quickly switch groups by pressing the PAD BANK button. You need to use the supporting software to set the product. Please read further in this manual to see how. In user-defined mode, press and hold the MODE key (the key backlight turns yellow) to light up all pads' backlight.

Velocity Curve:

TempoPAD features four velocity curves to adapt to different playing habits, namely, fixed velocity, soft, medium and hard. The velocity curve affects the feedback of the output note

velocity to the tapping intensity on the PAD (applicable to both PAD modes). Press the VELOCITY button to switch between different velocity curves. The backlight of the key indicates the current velocity curve type: **Fixed Velocity - White**: in this mode, the device always output a fixed velocity no matter how hard or soft you tap the pads. The default output velocity is 127. You can also change this velocity value through the supporting software (see the Software section for details); **Soft - Blue**: It is suitable for the players who are used to tapping with less intensity. Tap the pads softly to get higher velocity notes; **Medium - Green**: The velocity is linearly related to MIDI value, which is applicable to most music and performers; **Hard - Red**: It is suitable for players who are used to tapping the pads with greater strength. It needs to tap harder to get greater velocity notes.

Knobs:

TempoPAD features four endless rotary encoders, which works in three groups, and can control 12 parameters totally. Each knob can send CC events, channel aftertouch events or pitch bend events.

Press KNOB BANK button to cycle red, green and blue (corresponding to A, B and C) groups in turn. The color of the LED below the button and knob indicates the current group.

You can use the supporting software to define the parameters sent by each knob. Please refer to the description of supporting software for details.

By default, the events sent by the rotary knob are as follows:

BANK A		BANK B		BANK C	
Knob3	Knob4	Knob3	Knob4	Knob3	Knob4
CC #7	CC #1	CC #14	CC #15	CC #53	CC #54
Knob1	Knob2	Knob1	Knob2	Knob1	Knob2
CC #2	CC #10	CC #12	CC #13	CC #51	CC #52

Transport Buttons:

TempoPAD has six transport control buttons with back lights: fast forward, fast backward, stop, record, play/pause, and loop buttons. Press the buttons to send CC or MMC events. When sending CC message, the backlight is green; When sending MMC message, the backlight is red. You can change the message through the supporting software. See the description of the supporting software for details. If the device sends MMC messages, you need to turn on the MMC slave function in your DAW; If the device sends CC messages, you should set up a

controller mapping which means the relationship between the DAW and controller to achieve the corresponding functions. Without assigning functions in the DAW, the buttons do not control anything.

Note: There is no corresponding function of LOOP in the MMC command, so the LOOP button sends CC message only.

By default, press the button to send CC events, see the following table:

	Fast Backward	Stop	Fast Forward	Record	Play/Pause	Loop
CC Number#	21	22	23	24	25	26
Channel	1	1	1	1	1	1
Mode	Momentary	Momentary	Momentary	Latch	Latch	Latch

NOTE REPEAT & TAP TEMPO:

TempoPAD has the functions of note repeat and tap tempo. Turn on the note repeat function, and the device will repeatedly send note events according to the setting: Tempo, note type and SWING; The tempo can be set by repeatedly pressing the TAP button.

TAP TEMPO Button: This button is used to set the tempo. If the note repeat function is turned on, the LED light under the button will flash, and the flashing speed represents the tempo. If pressing multiple times, the device will measure the speed, and the light will flash along with the tempo that the user presses the button, that completes the setting.

Press The NOTE REPEAT Button to Turn The Note Repeat Function On or Off: After the function is enabled, press and hold the pad, and the device will repeatedly send note events according to the note type and tempo set by the user until the pad is released;

Press And Hold The NOTE REPEAT Button (The button backlight is red) while Pressing The Pad (The pad backlight is green) to Set The Note Type And SWING Amount:

Note Repeat + pad 1 – 8 to select the note type: quarter (1/4), eighth (1/8), sixteenth (1/16) or 32th (1/32); On Pads 5 – 8, T represents triplet; Note Repeat + pad 9-14 to select swing amount: 50%[off], 55%, 57%, 59%, 61% or 64%.

Note: The REPEAT function only takes effect for note events. When the PAD is set to send CC or PC events, the repeat function does not take effect.

DESCRIPTION OF SUPPORTING SOFTWARE

Software Download And Installation:

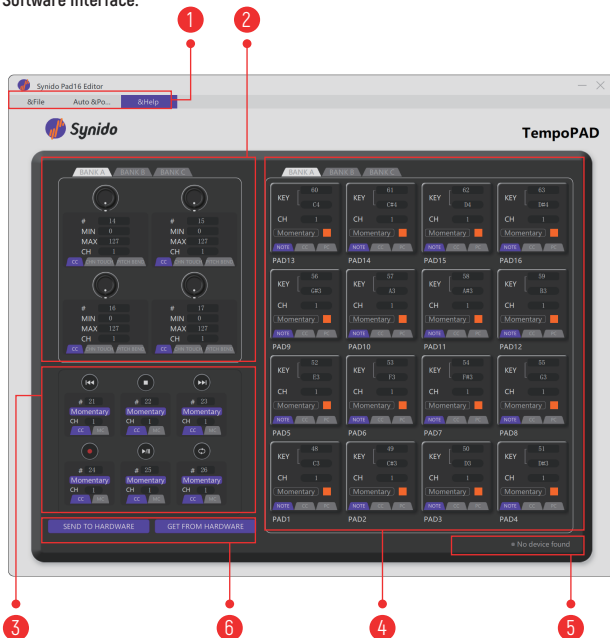
There is a supporting software to edit, write, or read the configuration of the TempoPAD and thus the TempoPAD could generate various MIDI commands.

The download address of the supporting software is:

<https://www.synido.cn/support/downloads/>

After downloading, please run the program to install.

Software Interface:



1.Menu

2. Knob setting area

3.Transport setting area

4.Pad setting area

5.Connection status area

6.Send/get the settings on the hardware

Device Occupation (WINDOWS system only):

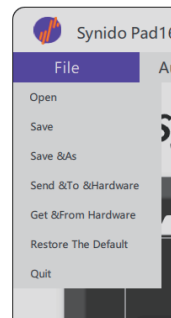
The connection status of the device is displayed at the lower right corner [5] of the software. Only when "Connected" is displayed, the software can write or read the configuration on the TempoPAD;

If "Connected" is displayed here, it means the software and TempoPAD is connected, and the software can transfer the configuration with the device;

If "Not Connected" is displayed here, it may be because the device is not normally connected to the computer, or DAW is occupying the device at this time; You need to exit the DAW or other programs that are occupying the TempoPAD, and sometimes you need to reconnect the device.

Menu:

The functions of the menu are: open, save, save as, send to hardware, get from hardware, restore to default, and exit.



Open: Read a configuration file.

Save: Save the current parameter configuration in the current preset file. If there is no preset file, a dialog box will be opened to save it as a new file, which will be saved with the extension of .stm.

Save As: Saves the current configuration as a new preset file.

Send to Hardware: Send the current configuration to TempoPAD.

Get from Hardware: Get configuration from TempoPAD.

Restore Default Value: Restore to the factory default.

Exit: Exit the control panel.

Knob Area:



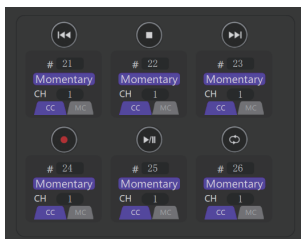
Click the Save tab to switch to the group to be edited;

Click the tag to select the event type. The optional types are: CC, channel aftertouch or pitch bend event;

Enter the minimum value and maximum value to determine the control range of the knob;

Select the channel of the event.

Transport Area:



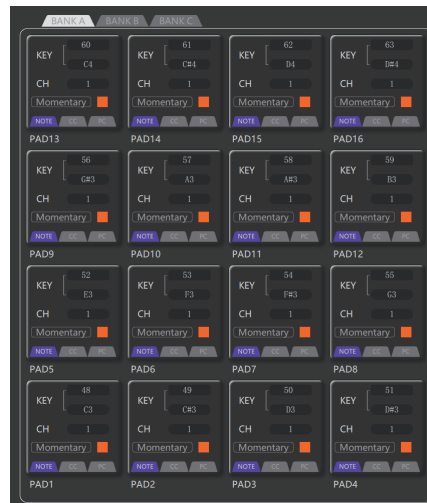
Click the tag selection button to send CC events or MMC events;

Enter the event number;

Click the button to switch the function instant or switch (it cannot be adjusted when sending the MMC command);

Select the channel of the event.

PAD Area:



Click the Save tab to switch among group A, B and C;

Click the small color block to open the RGB color editor to adjust the backlight color of the PAD;

Click Channel to select the channel to send the event;

Click the PAD tab to select the event type: the optional types are: note, CC, and PC;

If you select a note event, enter a number in the key bar, or click the note name to adjust the pitch of the note; The momentary/latch function cannot be selected in note events;

If selecting CC events, enter the event number in the key bar;

If selecting PC events, enter the event number in the key bar; In PC event mode, the momentary/latch function is unavailable, and each time you press PAD, a PC event is sent.

Note: in momentary mode: when pressing a key, an event with a value of 127 will be sent, and when releasing the key, an event with a value of 0 will be sent; In latch mode: events with values of 127 and 0 will be sent alternately, every time you finish a press + release operation.

Auto Populate:

Auto Populate allows you to quickly lay out certain functions on the panel with a certain regularity. Click Auto Populate in the menu to open the window. Fill in the corresponding parameters in the window, check them, and click the application on the right to quickly layout the parameters to the panel.

Auto Populate

KNOBS

CC range starting at 0 ☐
Set CC Min 0 ☐
Set CC Max 127 ☐
Set CC CH 1 ☐

Set CHN TOUCH Min 0 ☐
Set CHN TOUCH Max 127 ☐
Set CHN TOUCH CH 1 ☐

Set PITCH BEND LSB Min 0 ☐
Set PITCH BEND LSB Max 127 ☐
Set PITCH BEND MSB Min 0 ☐
Set PITCH BEND MSB Max 127 ☐
Set PITCH BEND CH 1 ☐

PADS

Set CC Type Moment ☐
CC range starting at 0 ☐
With Values Asc ☐
Set CC CH 1 ☐

NOTE range starting at 0 ☐
With Values Asc ☐
Set NOTE CH 1 ☐

PC range starting at 0 ☐
With Values Asc ☐
Set PC CH 1 ☐

Set Color R 0 ☐
G 0 ☐
B 0 ☐

Pressure Threshold

Full Level 0 ☐
Velocity Curve FULL ☐

Apply to BANK A
Apply to BANK B
Apply to BANK C

Knob: Quickly set CC value, range and channel, Aftertouch range, aftertouch channel, Pitch bend coarse tuning, fine tuning range and pitch bend channel.

Launchpad: Quickly set CC, NOTE, PC values and RGB light effects.

Pressure threshold: Quickly set the velocity value and velocity curve.

Firmware Upgrade:

Connect the device, until the software displays "Connected";
Click Help Menu-About, and click firmware update in the dialog box opened.

PRODUCT SPECIFICATION

Product Model: TempoPAD P16

Power Consumption: 250mA

Color: Black + Purple

Product Weight: 500g

Material: Plastic + Silica Gel

Product Size: 214*157*30mm

APPENDIX

MIDI Event Interpretation:

Event: A MIDI command.

Channel: There are 16 channels in MIDI protocol, and most MIDI events contain channel information. Users can set on the receiving device to hear only the events from a certain channel. For example, device A only receives events from channel 1, and device B only receives events from channel 2. Then on the sending device, the user can send channel 1 events to control device A, and send channel 2 events to control device B.

CC Event: Controller Change event. A CC event contains the following information: channel number, CC number, and event value. MIDI protocol defines some specific CC numbering functions, for example, CC#7 event is the main volume event, and CC # 64 is the piano pedal event; Some CC commands are not defined functions, so users can define them as wish. See the appendix for the definition of CC events;

CC event can be a single command: for example, press a PAD and send a command of CC # 64 at value 127, and the receiving device will execute the action of opening the piano pedal after receiving the command; It can also be continual commands, such as rotating a knob to send events of CC # 7 with a value from 0 to 127. After receiving the command, the system will adjust the volume from the minimum to the maximum.

PC Event: Program Change event. It is also a kind of control command containing channel information and event numbers. It usually used for voice change.

Momentary: When a key [button] is pressed, an ON event is sent, and when a key [button] is released, an OFF event is sent; For example, when a pad is used to imitate the function of the piano keys, the "Note ON" command is sent when the pad is pressed, and the "Note OFF" command is sent when the pad is released.

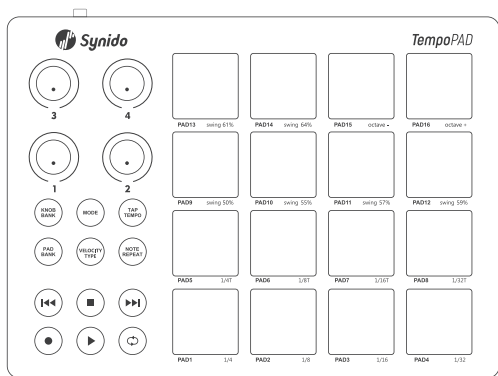
Latch: When the full operation of pressing + releasing is completed, the ON and OFF events will be sent alternately; For example, it can be used as a switch. Each time you tap a pad, it alternately sends commands with values of 127 and 0. Set 127 as ON and 0 as OFF at the receiving end, the control effect can be achieved.

CC Default Event List:

CC 0 (BankSel MSB)	CC 44 (Control 44)	CC 88 (Control 88)
CC 1 (Modulation)	CC 45 (Control 45)	CC 89 (Control 89)
CC 2 (Breath)	CC 46 (Control 46)	CC 90 (Control 90)
CC 3 (Control 3)	CC 47 (Control 47)	CC 91 (ExtEff 1 Depth)
CC 4 (Foot)	CC 48 (Control 48)	CC 92 (ExtEff 2 Depth)
CC 5 (Portamento)	CC 49 (Control 49)	CC 93 (ExtEff 3 Depth)
CC 6 (DataEnt MSB)	CC 50 (Control 50)	CC 94 (ExtEff 4 Depth)
✓ CC 7 (Main Volume)	CC 51 (Control 51)	CC 95 (ExtEff 5 Depth)
CC 8 (Balance)	CC 52 (Control 52)	CC 96 (Data Incr)
CC 9 (Control 9)	CC 53 (Control 53)	CC 97 (Data Decr)
CC 10 (Pan)	CC 54 (Control 54)	CC 98 (NRPN LSB)
CC 11 (Expression)	CC 55 (Control 55)	CC 99 (NRPN MSB)
CC 12 (Control 12)	CC 56 (Control 56)	CC 100 (RPN LSB)
CC 13 (Control 13)	CC 57 (Control 57)	CC 101 (RPN MSB)
CC 14 (Control 14)	CC 58 (Control 58)	CC 102 (Control 102)
CC 15 (Control 15)	CC 59 (Control 59)	CC 103 (Control 103)
CC 16 (Gen Purp 1)	CC 60 (Control 60)	CC 104 (Control 104)
CC 17 (Gen Purp 2)	CC 61 (Control 61)	CC 105 (Control 105)
CC 18 (Gen Purp 3)	CC 62 (Control 62)	CC 106 (Control 106)
CC 19 (Gen Purp 4)	CC 63 (Control 63)	CC 107 (Control 107)
CC 20 (Control 20)	CC 64 (Sustain)	CC 108 (Control 108)
CC 21 (Control 21)	CC 65 (Porta On/Off)	CC 109 (Control 109)
CC 22 (Control 22)	CC 66 (Sostenuto)	CC 110 (Control 110)
CC 23 (Control 23)	CC 67 (Soft Pedal)	CC 111 (Control 111)
CC 24 (Control 24)	CC 68 (Legato FS)	CC 112 (Control 112)
CC 25 (Control 25)	CC 69 (Hold 2)	CC 113 (Control 113)
CC 26 (Control 26)	CC 70 (Sound Var)	CC 114 (Control 114)
CC 27 (Control 27)	CC 71 (Harmonic)	CC 115 (Control 115)
CC 28 (Control 28)	CC 72 (Release Time)	CC 116 (Control 116)
CC 29 (Control 29)	CC 73 (Attack Time)	CC 117 (Control 117)
CC 30 (Control 30)	CC 74 (Brightness)	CC 118 (Control 118)
CC 31 (Control 31)	CC 75 (Control 75)	CC 119 (Control 119)
CC 32 (BankSel LSB)	CC 76 (Control 76)	CC 120 (AllSndOff)
CC 33 (Modulation LSB)	CC 77 (Control 77)	CC 121 (Reset Ctrl)
CC 34 (Breath LSB)	CC 78 (Control 78)	CC 122 (Local Ctrl)
CC 35 (Control 35)	CC 79 (Control 79)	CC 123 (AllNoteOff)
CC 36 (Foot LSB)	CC 80 (Gen Purp 5)	CC 124 (Omni Mode Off)
CC 37 (Porta LSB)	CC 81 (Gen Purp 6)	CC 125 (Omni Mode On)
CC 38 (DataEnt LSB)	CC 82 (Gen Purp 7)	CC 126 (Mono Mode On)
CC 39 (Main Volume LSB)	CC 83 (Gen Purp 8)	CC 127 (Poly Mode On)
CC 40 (Balance LSB)	CC 84 (Porta Ctrl)	
CC 41 (Control 41)	CC 85 (Control 85)	
CC 42 (Pan LSB)	CC 86 (Control 86)	
CC 43 (Expr LSB)	CC 87 (Control 87)	

欢迎

欢迎您选购本公司TempoPAD产品。TempoPAD 是一款基于MIDI协议的输入控制设备，使用它可以在电脑DAW中快速输入音符，或发出控制命令，提升工作效率。它非常适合于音乐制作、DJ及现场表演。经过团队的精心打造，它是一款设计精良、手感优秀且炫酷的产品。值得特别提醒的是这款设备仅输出MIDI指令而不会产生声音信号，用户需要具备一些相关音乐知识才能合理使用它。

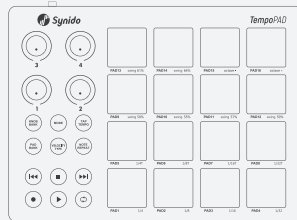


产品特点：

- 16个带RGB背光的力度感应打击垫，2种工作模式
- 6个带RGB背光的力度感应打击垫，2种工作模式
- 4个无极旋转编码器，分3组作为12个控制器。可用于发送CC、通道触后或弯音事件
- 多个接口，易于电脑、手机、平板等多种设备连接
- 具备传统的MIDI输出（3.5mm MIDI 输出）
- 配套的电脑控制软件，可视化调整硬件上的功能分配

包装清单

x1



TempoPAD P16主机

x1



USB-C数据线

x4



3.5转5PIN母头DIN转换器

x1



使用说明书

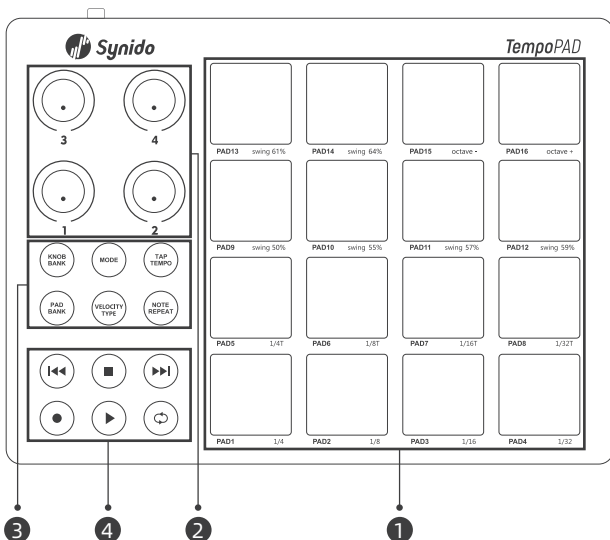
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合格证

面板说明

前面板说明:



1. 打击垫: 16个具有力度感应的打击垫。敲击打击垫以发送MIDI指令；打击垫有两种工作模式。

2. 旋钮: 4个可以360°自由旋转的编码器。旋转旋钮以发送MIDI指令；旋钮有三个自定义分组，可实现12种指令。

3. 功能控制按键:

按下KNOB BANK按键可依次切换三个旋钮功能组；

按PAD BANK 可依次切换三个打击垫分组；

按MODE键可切换两种打击垫的工作模式；

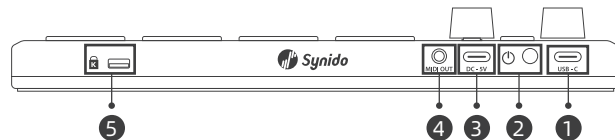
按TAP TEMPO键可通过敲击确定节拍速度；

按NOTE REPEAT键可激活/关闭音符重复功能；

按VELOCITY TYPE键依次切换PAD的力度曲线。

4. 走带控制键: 6个走带控制键，可以发送走带控制指令。指令以CC指令或MMC指令发送。您可以通过本机配套的控制软件编辑这些指令。

接口面板:



1. USB-C 接口: 使用标准 USB 电缆将此 USB 端口连接到您的计算机。电脑的 USB 端口会为 TempoPAD 提供电力并与您的计算机发送和接收数据。

2. 电源开关: 开启和关闭设备。

3. DC-5V: 电源供电接口，当TempoPAD通过USB-C接口连接移动设备（手机/平板）时，此接口可提供供电，以减少移动设备消耗电量。

4. MIDI OUT: 3.5mm插座，以标准MIDI协议输出信号，需要TS-5PIN DIN转接线。

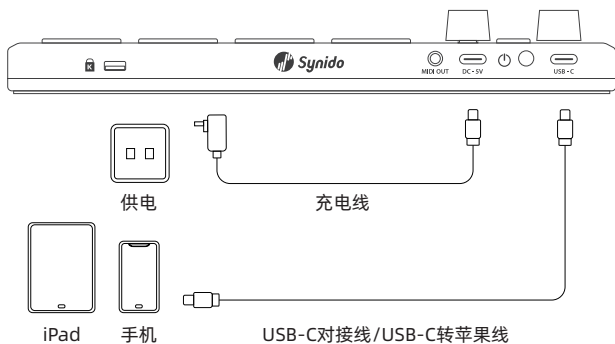
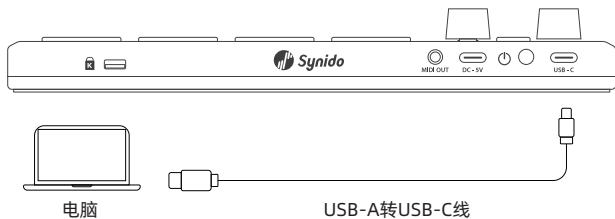
5. 锁孔: 您可以使用此锁槽将 TempoPAD 固定在桌子或其他表面上。

使用说明

连接方式：

产品有两个USB-C接口。如果只用一个，请使用USB-C接口。

- ①用USB-A转USB-C线，将产品直接连接电脑；
- ②用USB-C对接线，连接至安卓手机等设备；
- ③用USB-C线转苹果线，连接至iPad或iPhone上；
- ④使用DC-5V接口提供额外供电。



打击垫：

Synido TempoPAD的打击垫有两种工作模式：琴键模式和自定义模式。

按下MODE按键可以切换模式。

MODE按键背光的颜色表示当前所在的模式：红色代表琴键模式；绿色代表自定义模式。

琴键模式（MODE按键为红色）：琴键模式下，pads模仿琴键工作，敲击打击垫将输出NOTE指令。默认情况下，敲击PAD1-PAD13可以发送从C1-C2的12个半音（如图）。按下PAD15/PAD16可以上移或下移八度。在这个模式下，BANK的功能无法使用。

C		OCTAVE-	OCTAVE+
PAD13 swing 61%	PAD14 swing 64%	PAD15 octave -	PAD16 octave +
#G/bA	A	#A/bB	B
PAD9 swing 50%	PAD10 swing 55%	PAD11 swing 57%	PAD12 swing 59%
E	F	#F/bG	G
PAD5 1/4T	PAD6 1/8T	PAD7 1/20T	PAD8 1/32T
C	#C/bD	D	#D/bE
PAD1 1/4	PAD2 1/8	PAD3 1/32	PAD4 1/32

自定义模式（MODE按键为绿色）：此模式下PAD可以按照您的设定发送NOTE/CC/PC指令，PAD的颜色也可以按照您的喜好自定义。您可以保存3个自定义功能组，并通过按PAD BANK快速切换分组。您需要用配套软件来设定产品，具体设定方法请详见配套软件的说明。

在事件模式下，长按MODE按键（按键背光变为黄色）点亮所有PAD背光。

打击垫的力度曲线：

TempoPAD共有四种力度曲线以适应不同的演奏习惯，分别是固定力度、柔软、中等、较硬。力度曲线将影响敲击PAD强弱与输出音符力度的反馈（适用于两种PAD模式）。

按VELOCITY键依次切换不同的力度曲线，按键的背光指示当前的力度曲线类型：**固定力度-白色**：在该模式下无论您敲击的强弱如何，打击垫始终输出固定力度。默认的输出力度为127，您还可以通过配套软件改变此力度值（详见软件部分）；**柔软-蓝色**：适用于习惯用较小力气敲击打击垫的演奏者，轻敲PAD就可以得到较高的力度值；**中等-绿色**：力度与MIDI值呈线性关系，适用于大部分音乐和表演者；**强硬-红色**：适用于习惯用大力气敲击打击垫的演奏者，需要较强的敲击才能得到较大的力度值。

旋钮：

TempoPAD有4个无极旋转编码器，分为3组，最多可以控制12个参数。各个旋钮可以发送CC事件、通道触后事件或弯音事件。

按下KNOB BANK按钮依次循环红、绿、蓝（对应A、B、C）三个分组，按钮与旋钮下方的LED灯的颜色指示当前所在的分组。

您可以使用配套软件来定义各个旋钮所发送的参数(请详见配套软件的说明)。默认情况下，旋转旋钮发送的事件如下表：

BANK A		BANK B		BANK C	
Knob3	Knob4	Knob3	Knob4	Knob3	Knob4
CC #7	CC #1	CC #14	CC #15	CC #53	CC #54
Knob1	Knob2	Knob1	Knob2	Knob1	Knob2
CC #2	CC #10	CC #12	CC #13	CC #51	CC #52

走带控制按钮：

empoPAD具有6个带背光的走带控制按钮：快退、快进、播放/暂停、停止、循环、录音按钮，按下可以发送CC或者MMC事件。当发送CC事件时按键亮绿色灯；当发送MMC事件时按键亮红色灯。您可以通过配套软件调整发送的指令，详见配套软件的说明。

如果设备发送的是MMC事件，需要在软件中打开MMC接收功能；

如果设备发送的是CC事件，必须在电脑DAW软件中调整映射关系来实现相应功能的控制。未在宿主软件中指派功能的情况下，按键无法实现控制。

注：MMC指令中没有LOOP的相应功能，所以LOOP按钮仅发送CC事件。

默认情况下，按下按钮发送CC事件，见下表：

	快退	停止	快进	录音	播放/暂停	循环
CC编号#	21	22	23	24	25	26
通道	1	1	1	1	1	1
模式	即时	即时	即时	切换	切换	切换

音符滚奏与点击测速：

TempoPAD具备音符重复和点击测速功能。开启音符重复功能，设备将按照既定的节拍速度、音符时值和SWING（摇摆量）重复发送音符事件；节拍速度可以通过反复按下TAP键测速设定。

TAP TEMPO按钮：该按钮用于设置节拍速度。如果音符重复（note repeat）功能处于打开状态，该按键下面的LED灯会闪烁，闪烁的快慢代表了节拍速度。连续按下多次设备会测速，灯光跟随用户按键的速度闪亮，即完成设置。

按下NOTE REPEAT按钮开启或关闭音符重复功能：开启功能后，按住打击垫，设备将按照用户所设定的音符时值和节拍速度反复发送音符事件直至释放打击垫。

按住NOTE REPEAT按钮（按钮背光亮红色）的同时按下打击垫（打击垫背光绿色）设定音符类型和SWING量：

Note Repeat+打击垫 1-8选择音符类型：四分音符（1/4）、八分音符（1/8）、十六分音符（1/16）或32分音符（1/32）；在Pads 5-8上，T表示三连音。

Note Repeat+打击垫9-14选择摇摆量：关闭、55%、57%、59%、61% 或64%。

提示：REPEAT功能仅对音符事件生效，当设定PAD发送CC或PC事件时，repeat功能不生效。

配套软件说明

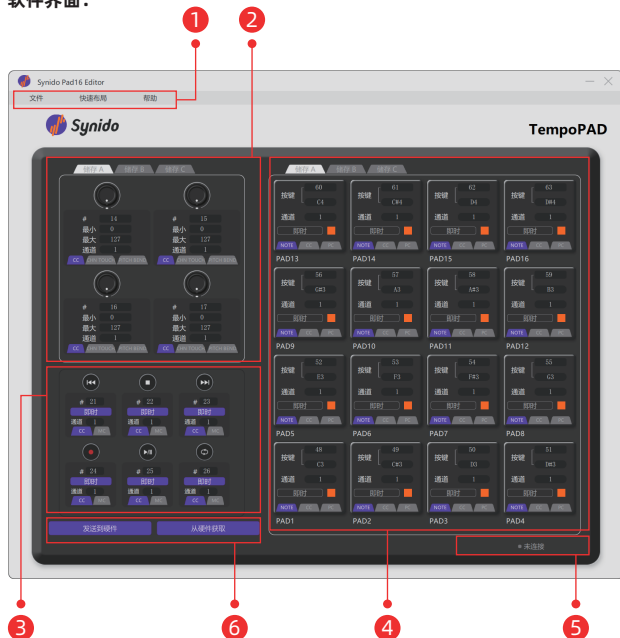
软件下载与安装:

TempoPAD有一个配套软件, 用来写入或读取TempoPAD中的参数配置, 实现各种MIDI命令的发送。

配套软件的下载地址为: <https://www.synido.com>

下载后请运行程序, 执行安装。

软件界面:



①菜单栏

②旋钮设置区

③走带按键设置区

④打击垫设置区

⑤连接状态指示

⑥发送/获取硬件上的设置

设备占用 (适用于WINDOWS系统):

设备的连接状态显示在软件的右下角 (⑤处), 只有显示已连接时, 软件才可以写入或读取TempoPAD的参数配置;

如果此处显示“已连接”表示此时软件和TempoPAD连接正常, 软件可以和设备传输配置;

如果此处显示“未连接”可能是因为设备没有正常连接到电脑, 或者有DAW此时正在占用设备; 您需要退出DAW, 或其他正在占用此MIDI设备的程序, 有时还需要重新连接设备。

菜单栏:

菜单栏的功能有: 打开、保存、另存为、发送到硬件、从硬件获取、恢复默认值和退出。



打开: 读取一个参数配置文件。

保存: 将当前的参数配置保存在当前预设文件中, 如当前无预设文件将会打开对话框保存到新的文件中, 文件以stm后缀保存。

另存为: 将当前参数配置保存成新的存预设文件。

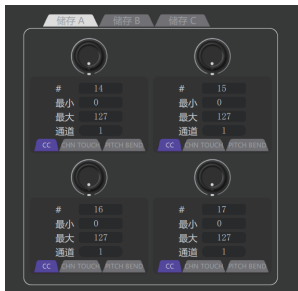
发送到硬件: 将当前参数配置发送到TempoPAD。

从硬件获取: 从TempoPAD上获取参数配置。

恢复默认值: 恢复出厂设置默认的参数配置。

退出: 退出控制面板。

编码器设置:



点击储存标签切换想要编辑的组；
点击标签选择事件类型，可选的类型有：CC、通道触后或弯音事件；
输入最小值、最大值确定旋钮的控制范围；
选择事件的通道。

走带控制:



点击标签选择按钮发送CC事件或MMC事件；
输入事件编号；
点击按钮切换功能即时或是切换（发送MMC命令时不可调整）；
选择事件的通道。

PAD设置:



点击储存标签切换ABC三个分组；
点击小色块打开RGB颜色编辑器，调整PAD的背光颜色；
点击通道选择事件发送的通道；
点击PAD的标签选择事件类型：可选的类型有：音符、CC、和PC；
如果选择音符事件，在按键栏中输入数字，或点击音名调整音符的音高；在音符事件中无法选择即时/切换功能；
如果选择CC事件，在按键栏中输入事件编号；
如果选择PC事件，在按键栏中输入事件编号；PC事件模式中，切换/即时功能不可用，每次按压PAD发送一次PC事件。

提示：即时模式下：按下一个按键时发送值为127的事件，松开琴键时发送值0的事件；切换功能模式下：每完成一次按下并离开按键的操作时，交替发送值为127和0的事件。

快速布局：

快速布局可以让你以一定的规律快速的将某些功能布局到面板上，点击菜单栏中的快速布局打开窗口。在窗口中填写相应的参数，并勾选后，点击右侧的应用即可将参数快速布局到面板。



旋钮：快速设置CC值、大小范围、通道、触后范围、触后通道、弯音粗调、精调范围及弯音通道。

打击垫：快速设置CC、NOTE、PC值 及RGB灯光效果。

压力阈值：快速设置力度值及力度曲线。

固件升级：

先连接设备，知道软键显示“已连接”状态；

点击帮助菜单-关于，在打开的对话空中点击firmware update。

产品规格

产品型号：TempoPAD P16

整机功耗：250mA

产品颜色：黑+紫

产品重量：500g

产品材质：塑料+硅胶

产品尺寸：214*157*30mm

MIDI事件解释:

事件: 即一条MIDI指令。

通道: 在MIDI协议中有16个通道, 绝大多数MIDI事件包含通道信息。用户可以在接收设备上设置仅接收某个通道的事件, 如A设备仅接收通道1事件, B设备仅接收通道2事件。然后当用户可以在发送设备上发送通道1事件来控制A设备, 发送通道2事件来控制B设备。

CC事件: 即控制器变化事件 (Controller Change)。一个CC事件包含以下几个信息: 通道号、CC编号、事件值。MIDI协议定义了一些特定的CC编号功能, 如CC#7号事件为主音量事件, CC#64是延音踏板事件; 有些CC指令未被指派功能, 即用户可以自行定义。CC事件的定义详见附录;

CC事件可以是单独一条指令: 比如按下某PAD上发送一条CC#64号, 值127的指令, 接收端接收到指令后执行打开延音踏板动作; 也可以是连续的多条指令, 比如旋转一个旋钮, 发送CC#7号, 值从0发送到127的事件, 系统收到指令后, 将音量从最小调整至最大。

PC事件: 即程序变更事件 (Program Change)。也是控制命令的一种。包含通道信息和事件编号。通常用来表示音色更换。

即时按键: 当按下下一个按键 (按钮) 时发送开启事件, 松开琴键 (按钮) 时发送关闭事件; 比如用打击垫模仿琴键的功能时, 按下打击垫时发送 “音符开启” 指令, 当离开打击垫时发送 “音符关闭” 指令。

切换按键: 每完成一次按下并离开按键操作时, 交替发送开启和关闭事件; 比如可以作为开关使用: 每敲击一次PAD交替发送值127和0的指令, 在接收端设定127为开, 0为关闭, 达成控制效果。

CC默认事件列表:

CC 0 (BankSel MSB)	CC 44 (Control 44)	CC 88 (Control 88)
CC 1 (Modulation)	CC 45 (Control 45)	CC 89 (Control 89)
CC 2 (Breath)	CC 46 (Control 46)	CC 90 (Control 90)
CC 3 (Control 3)	CC 47 (Control 47)	CC 91 (ExtEff 1 Depth)
CC 4 (Foot)	CC 48 (Control 48)	CC 92 (ExtEff 2 Depth)
CC 5 (Portamento)	CC 49 (Control 49)	CC 93 (ExtEff 3 Depth)
CC 6 (DataEnt MSB)	CC 50 (Control 50)	CC 94 (ExtEff 4 Depth)
✓ CC 7 (Main Volume)	CC 51 (Control 51)	CC 95 (ExtEff 5 Depth)
CC 8 (Balance)	CC 52 (Control 52)	CC 96 (Data Incr)
CC 9 (Control 9)	CC 53 (Control 53)	CC 97 (Data Decr)
CC 10 (Pan)	CC 54 (Control 54)	CC 98 (NRPN LSB)
CC 11 (Expression)	CC 55 (Control 55)	CC 99 (NRPN MSB)
CC 12 (Control 12)	CC 56 (Control 56)	CC 100 (RPN LSB)
CC 13 (Control 13)	CC 57 (Control 57)	CC 101 (RPN MSB)
CC 14 (Control 14)	CC 58 (Control 58)	CC 102 (Control 102)
CC 15 (Control 15)	CC 59 (Control 59)	CC 103 (Control 103)
CC 16 (Gen Purp 1)	CC 60 (Control 60)	CC 104 (Control 104)
CC 17 (Gen Purp 2)	CC 61 (Control 61)	CC 105 (Control 105)
CC 18 (Gen Purp 3)	CC 62 (Control 62)	CC 106 (Control 106)
CC 19 (Gen Purp 4)	CC 63 (Control 63)	CC 107 (Control 107)
CC 20 (Control 20)	CC 64 (Sustain)	CC 108 (Control 108)
CC 21 (Control 21)	CC 65 (Porta On/Off)	CC 109 (Control 109)
CC 22 (Control 22)	CC 66 (Sostenuto)	CC 110 (Control 110)
CC 23 (Control 23)	CC 67 (Soft Pedal)	CC 111 (Control 111)
CC 24 (Control 24)	CC 68 (Legato FS)	CC 112 (Control 112)
CC 25 (Control 25)	CC 69 (Hold 2)	CC 113 (Control 113)
CC 26 (Control 26)	CC 70 (Sound Var)	CC 114 (Control 114)
CC 27 (Control 27)	CC 71 (Harmonic)	CC 115 (Control 115)
CC 28 (Control 28)	CC 72 (Release Time)	CC 116 (Control 116)
CC 29 (Control 29)	CC 73 (Attack Time)	CC 117 (Control 117)
CC 30 (Control 30)	CC 74 (Brightness)	CC 118 (Control 118)
CC 31 (Control 31)	CC 75 (Control 75)	CC 119 (Control 119)
CC 32 (BankSel LSB)	CC 76 (Control 76)	CC 120 (AllSndOff)
CC 33 (Modulation LSB)	CC 77 (Control 77)	CC 121 (Reset Ctrl)
CC 34 (Breath LSB)	CC 78 (Control 78)	CC 122 (Local Ctrl)
CC 35 (Control 35)	CC 79 (Control 79)	CC 123 (AllNoteOff)
CC 36 (Foot LSB)	CC 80 (Gen Purp 5)	CC 124 (Omni Mode Off)
CC 37 (Porta LSB)	CC 81 (Gen Purp 6)	CC 125 (Omni Mode On)
CC 38 (DataEnt LSB)	CC 82 (Gen Purp 7)	CC 126 (Mono Mode On)
CC 39 (Main Volume LSB)	CC 83 (Gen Purp 8)	CC 127 (Poly Mode On)
CC 40 (Balance LSB)	CC 84 (Porta Ctrl)	
CC 41 (Control 41)	CC 85 (Control 85)	
CC 42 (Pan LSB)	CC 86 (Control 86)	
CC 43 (Expr LSB)	CC 87 (Control 87)	