|  |  |  |  |
| --- | --- | --- | --- |
| **KEY MAPPING** | Text  Description automatically generated | **BASIC** | Text  Description automatically generated |
| **MULTIMEDIA** |
| **MACRO EDITOR** | **MACRO** |
| **LAYER MANAGEMENT** |
| **LED LIGHT MANAGEMENT** | **SPECIAL KEYS** |
| **LED LIGHT CONTROL** |
| **ARCHIVE (CONFIGURATION) MANAGEMENT** | **SURFACE DIAL EMULATION** |
| **MOUSE BUTTONS** |
|  | **KEY COMBINATIONS** |
| **PHOTOSHOP SHORTCUTS** |
| **MIDI** |
| **SAI** |

|  |  |  |  |
| --- | --- | --- | --- |
| **CLOSE (CTRL+W)** | **CONFIGURATION** | **KEYBOARD TEST** | **SETUP** |
|  | | | |

A screenshot of a phone

Description automatically generated with medium confidence Graphical user interface, application

Description automatically generatedA screenshot of a computer

Description automatically generated with medium confidence

A screenshot of a phone

Description automatically generated with medium confidence

**BASIC**

**MULTIMEDIA**

**MACRO**

**LAYER MANAGEMENT**

**SPECIAL KEYS**

**LED LIGHT CONTROL**

**SURFACE DIAL EMULATION**

**MOUSE BUTTONS**

**KEY COMBINATIONS**

**PHOTOSHOP SHORTCUTS**

**MIDI**

**SAI**



**NUMBER KEYS**





**CUST**

**OMIZE**

**CONFIGURATION | KEYB TEST | SETUP**

**CUST**

**OMIZE**

**BURST**

**1**

**BURST**

**2**

**BURST**

**3**

**ALPHABETIC KEYS**

**NUMBER KEYS**

**KEYBOARD DIRECT INPUT**

Graphical user interface, application

Description automatically generated



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A picture containing text, electronics

Description automatically generated

**RESET**

**RESET TEST RESULTS**

**TEST TRIGGER**

**TOUCH TONE**



A screenshot of a computer

Description automatically generated with medium confidence

**VERSION**

**SEND FEEDBACK AND SUGGESTIONS TO :**

**(BY THE WAY, WE WON’T GIVEA SHIT ABOUT YOU, ESPECIALLY IF YOU ASK US**

**THE ENGLISH VERSION OF THIS CRAP…**

**… SAME AS IF YOU ASK US THE KEYBOARD LAYOUT .JSON …**

**… SO THIS MAKE THE CXT 12E4 D&M, JUST ANOTHER CHINESEWARE COLLECTING DUST ON YOUR SHELF**

**CLEAR ALL MACROS (TAKE EFFECT AFTER RECONNECTING IT TO THE COMPUTER)**

**ENTER BOOTLOADER MODE**

**RESET THE KEYBOARD (TAKE EFFECT AFTER RECONNECTING IT TO THE COMPUTER)**

**QUICKLY SET THE KEY VALUE (AFTER SETTING THE CURRENT KEY, THE CURSOR WILL MOVE TO NEXT KEY)**



A picture containing text, computer, electronics, black

Description automatically generated

**CUST**

**OMIZE**

**BURST**

**1**

**BURST**

**2**

**BURST**

**3**

****

****

****

****

**NUMKEY PAD KEYS**

**ARROWS & SPECIAL KEYS**

**FUNCTION KEYS**

**CONTROLS KEYS**

**SYMBOLS KEYS**

**NUMBER KEYS**

**ALPHABETIC KEYS**

**CONFIGURATION | KEYB TEST | SETUP**



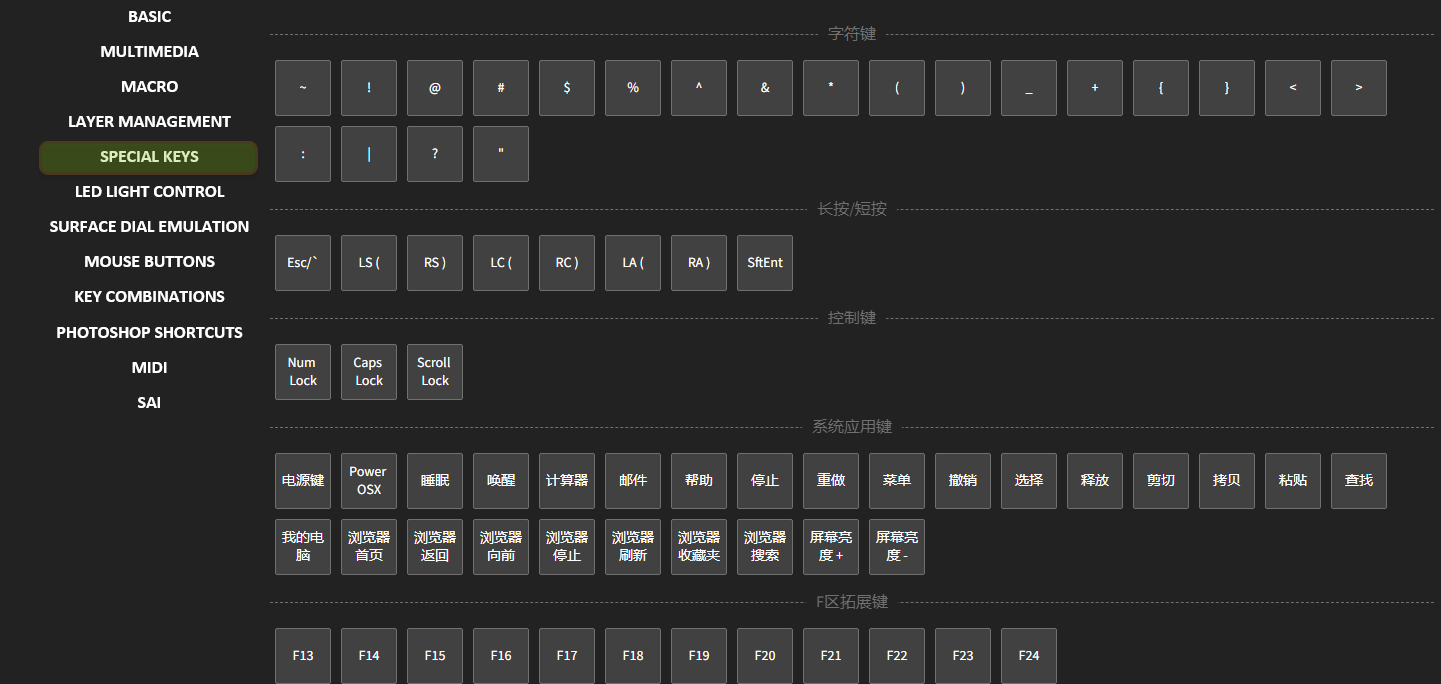
A screenshot of a phone

Description automatically generated with medium confidence

Graphical user interface, application

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| Graphical user interface, application  Description automatically generated | | | **VOLUME**  **+**  **MUTE**  **PAUSE**  **PLAY**  **STOP**  **PREV.**  **TRACK**  **NEXT**  **TRACK**  **Rewind with solid fill**  **Fast Forward with solid fill**  **select**  **Share with solid fill**  **VOLUME**  **-** |
| Graphical user interface, application  Description automatically generated | | | **MACRO**  **29**  **MACRO**  **0** |
|  | |  | |
|  |  | | |
| Graphical user interface, text, application  Description automatically generated | **SPACE**  **-**  **FN 1**  **KNOB**  **LAYER**  **+**  **KNOB**  **LAYER**  **-**  **SPACE**  **-**  **FN 1**  **SPACE**  **-**  **FN 1** | | |
|  |  | | |
|  |  | | |



***UNDO***

**REVOKE**

***UNDO***

**STOP**

**PASTE**

**COPY**

**CUT**

**LOOKUP**

**DE**

**SELECT**

**SELECT**

**BROWSER**

**SEARCH**

**BRIGHTNESS**

**-**

**BRIGHTNESS**

**+**

**MENU**

**REDO**

**HELP**

**EMAIL**

**CALC**

**BROWSER**

**FAVS**

**BROWSER**

**REFRESH**

**BROWSER**

**STOP**

**BROWSER**

**FORWARD**

**BROWSER**

**BACK**

**WAKE**

**SLEEP**

**POWER BUTTON**

**HOME PAGE**

**MY COMPUTER**

**EXTENDED FUNCTION KEYS**

**SYSTEM APPLICATION KEYS**

**CONTROL KEYS**

**SYMBOLS KEYS**

**LONG PRESS / SHORT PRESS**

**MY COMPUTER**

**HOME PAGE**

**BROWSER**

**BACK**

**BROWSER**

**FORWARD**

**BROWSER**

**STOP**

**BROWSER**

**REFRESH**

**BROWSER**

**FAVS**

**BROWSER**

**SEARCH**

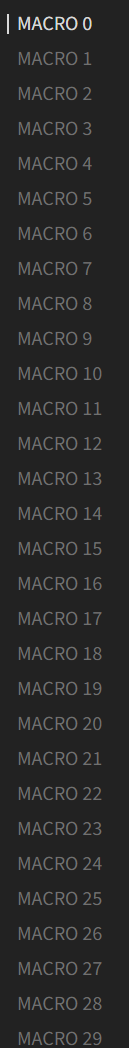
**BROWSER**

**FAVS**

**BROWSER**

**SEARCH**

|  |  |
| --- | --- |
| Graphical user interface, application, Teams  Description automatically generated  **RGB**  **ON/OFF**  **RGB EFFECT**  **-**  **RGB EFFECT**  **+**  **HUE**  **-**  **HUE**  **+**  **SATURATION**  **-**  **SATURATION**  **+**  **BRIGHTNESS**  **-**  **BRIGHTNESS**  **+**  **SPEED**  **-**  **SPEED**  **+**  A black background with white text  Description automatically generated | |
| **S left rotation : shortcut for left rotation // S right rotation : shortvut for right rotation // S button : press “click shortcut” – long press = call out the Surface Dial roulette menu**  **S left hand rotation 2 : 0.5 X default left hand rotation angle // S left hand rotation 3 : 2 X default hand rotation**  **S LEFT**  **HAND 2**  **S RIGHT**  **HAND 2**  **ROTATION**  **S LEFT**  **HAND 3**  **S RIGHT**  **HAND 3**  **ROTATION**  **S RIGHT**  **HAND**  **S BUTTON**  **S LEFT**  **HAND**  A black background with white text  Description automatically generated | |
| **Select the above combination option, then press the key value on the keyboard that you want to combine with, then select the key position and clickConfirm to complete the settings**  **Windows and Mac OS key mapping : CTRL = Control | Win = Command | Alt = Option**  A black background with white text  Description automatically generated | |
| **REVERSE CANVAS**  **SEQUENTIAL PAINTING CLOTH**  **OPACITY**  **1**  **OPACITY**  **10**  **BRUSH**  **FLOW**  **1**  **BRUSH**  **FLOW**  **10**  **BRUSH**  **SMOOTH**  **1**  **BRUSH**  **SMOOTH**  **10**  **it only support setting to the knob, and the opacity is automaticallyjudgeg clockwise. the setting is + when Pclockwise and – when Q counter clockwise**  A black background with white text  Description automatically generated | |
|  | |
|  | Graphical user interface, application  Description automatically generated  **BRUSH DENSITY**  **THICK BRUSH**  **Every time** |

 A screenshot of a computer

Description automatically generated with medium confidence

**KEYBOARD DIRECT INPUT**

**CONFIGURATION PAGE KEYBOARD TEST SETUP**

**KEEP**

**DELAY**

**CLEAR MACRO**

**ADD TO**

**MACRO EDITING TUTORIAL**

**ENTER THE MACRO TO BE EXECUTED WITH THE KEY VALUE “MACRO”.**

**IF THIS IS THE FIRST TIME EDITING, PLEASE USE MACRO EDITING TUTORIAL BELOW TO VIEW THE TUTORIAL**

A screenshot of a phone

Description automatically generated with medium confidence

A screenshot of a video game

Description automatically generated

**LIGHT BRIGHTNESS**

**LIGHTING EFFECT**

**LIGHTING EFFECT SPEED FOR MATRIX ONLY**

**LIGHT COLOR**

**EFFECTS**

**1 > OFF**

**2 > ALWAYS ON**

A screenshot of a phone

Description automatically generated with medium confidence

**KEYBOARD DIRECT INPUT**

**CONFIGURATION PAGE KEYBOARD TEST SETUP**

A screenshot of a computer

Description automatically generated with medium confidence

**CONFIGURATION PAGE KEYBOARD TEST SETUP**

A screenshot of a phone

Description automatically generated with medium confidence

**KEYBOARD DIRECT INPUT**

**SAVE**

**OPEN**

**SAVE SETTINGS**

**LOAD SETTINGS**

Graphical user interface

Description automatically generated

Key setting tutorial ( <https://cxtkb.com/zh/keymap> )

|  |  |  |
| --- | --- | --- |
| **Interface description**   * **layer label**   + - The keyboard has multiple layers. By clicking different layer labels, different layers in the keyboard can be set [just setting, the layer where the keyboard is located will not change unless it is manually switched] * **key position**   + - The grid corresponding to the physical keys on the keyboard, each key position can be set to an independent key value in each layer * **key-value classification**   + - Classify many key values according to certain rules, organize them into labels, and select different key values after switching * **key-value list**   + - The specific key value belonging to a certain category, when the mouse moves over a certain key value, the description of the key value will appear at the bottom of the interface * **Is it allowed to use the keyboard to enter key values**   + - Usually, you need to click the key with the mouse to enter the key value, and then select the key value setting from the key value list. If this option is enabled, after selecting the key position, press the key value on the keyboard to set the key Enter value to key   **General key-value setting tutorial**   1. Click the layer label first, select the layer to be set, the keyboard defaults to ***Layer 0*** 2. click the specific key you want to set in the key 3. select the key value you want to set from the key list below   **The settings take effect immediately and do not need to be saved or written** | |  |
| **Key combination setting tutorial**   1. click on the layer label and select the layer to be set 2. click the specific key you want to set in the key 3. Switch the key-value classification list to composite keys   Select the key combination you want to set modifier key (example ***CTRL+S***)   1. Select ***CTRL+*** 2. press on the keyboard ***S*** 3. At this time, the text input box below captures ***KC\_S*** 4. click OK to complete the setting   **The settings take effect immediately and do not need to be saved or written** |  | |

|  |  |
| --- | --- |
| **Knob key value setting tutorial**   1. The knob key is different from the conventional key. As shown in the figure above, the three connected together are the knob key, which also corresponds to the physical position of the knob on the keyboard. 2. The knob provides ***clockwise***, ***press/CLICK***, ***counterclockwise*** keys, corresponding to the three physical trigger modes of the knob 3. Set the key value to clockwise, and when the knob is turned clockwise, the key value will be triggered 4. The pressing of the knob can be combined with clockwise and counterclockwise to form a combination key.   If the pressing is set to ***Alt***, and the clockwise and counterclockwise is set to mouse wheel, then when pressing and turning, the trigger ***Alt + mouse wheel*** | Refresh with solid fill  Refresh with solid fill  **PRESS**  **CLICK**  **PRESS**  **CLICK**  **COUNTER CLOCK WISE**  **CLOCK WISE** |

SPECIAL KEYS (<https://cxtkb.com/zh/specialkeycode>)

|  |  |
| --- | --- |
| Included in the special keys of the key-value category 系统应用键 (**system application key**), which are not valid for all systems, move the mouse to the corresponding key value, and a prompt will appear at the bottom of the interface  A screenshot of a computer  Description automatically generated with medium confidence | |
| * ***F13***-***F24*** is not supported by default in Windows, and Windows does not assign functions to it. If you want to use ***F13***-***F24*** as a shortcut key for a certain software, you must support it by the software itself.   + For example: ***F13***-***F22*** can be captured when the shortcut keys of WeChat are set, but ***F13***-***F24*** cannot be captured when the shortcut keys of Netease Cloud Music are set | |
| **customize** | * The key is provided in the basic key (***customize***). The key value is a temporary key value. It is mainly used to cooperate with CXT\_KBT before the official version is released. Set the same layer and the same key as other functions, you can use |
| **D6U7** | * Since the CXT keyboard itself does not support setting the key value separately for the key press and release, but because some users have this demand, the additional key value is added * When the key value is set to a layer other than 6 or 7, press the key to trigger the key value of the key in layer6, and release it to trigger the key value of the key in ***layer7*** |
| **▽ key** | * Penetration key: In the default configuration of the keyboard, except for layer0, the default key values ​​of the keys of all other layers are penetrating keys * The keyboard itself has multiple layers. See [layer management]. This key value indicates that the current key position is in the current layer, and the key value is the same as the previous layer. If the previous layer is also the key value, it will continue to penetrate until layer 0. * For example: when the first row of ***LAyer 0*** is set to 1, 2, 3, 4, and the first row of ***layer1-7*** is all penetrating keys, then no matter which layer is switched to, it will trigger 1, 2, 3 defined in ***layer0 , 4***. |
| **TH45** | * Long and short press the combination key, short press will trigger the value set in layer 4 of the current key position, and long press will trigger the value set in layer 5 of the current key position |
| **TH67** | * Long and short press the combination key, short press will trigger the value of the current key set in ***layer*** ***6***, and long press will trigger the value of the current key set in layer 7 |
| **Burst key 1** | * Burst key, mode 1: When pressed, the value of the current key set in ***layer 7*** is continuously sent, and when released, it stops sending. |
| **Burst key 2** | * Burst key, mode 2: Continuously send the value of the current key set in ***layer 7*** when pressed, it will not stop when it is released, and stop until the next time it is pressed. |
| **Burst key 3** | * Burst key, mode 3: short press and release triggers the value set in ***layer 7*** of the current key position, and continuously sends the value set in ***layer 7*** of the current key position when long press is released, until the next time the key is pressed to stop sending |
| **Long press and short press time threshold is 200 milliseconds, press and release within 200 milliseconds, it is judged as short press, press and release after 200 milliseconds, judge as long press** | |
|  |  |

**The concept of layer [Layer] (**[**https://cxtkb.com/layersetting**](https://cxtkb.com/layersetting)**)**

|  |  |
| --- | --- |
| CXT series keyboards support the setting of multi-layer key values, depending on the model, 4-8 layers are available.   * Layer [Layer] starts counting from 0 (layer 0) * A layer can be understood as a [sheet] in an Excel file. * Each page contains a specific number of [keys]. * Each table on each page can be Store different [key value], and the layers do not interfere with each other: | Table  Description automatically generated with medium confidence |
| **layer management key:**  For layer management, providesMO(x), TO(x), the knob changes layers, you can choose flexibly according to your needs:  **MO(x): When this key is pressed, temporarily switch to layer x, and when released, return to the current layer**  Examples   1. Some notebooks have an ***Fn key***, and the combination of key values in the F area of the ***Fn key*** can become a special function, such as Fn F5=volume down, Fn F6=volume up,    1. the Fn key is not an actual key value, it is the same as ***MO***    2. The principle of the (x) key is similar, but ***MO(x)*** does not limit the key position or key value.    3. set ***MO(1)*** at the first key position of the ***0th floor*** in the upper left corner of the keyboard, and the first key of the 1st floor at the lower right corner of the keyboard If the bit is set to multimedia key - volume –    4. then when the keyboard is on ***layer 0***, press the first key in the upper left corner and the first key in the lower right corner at the same time, the volume will be triggered 2. The key above the ***character*** ***area*** in the keyboard A numeric key, usually consisting of two characters, such as ***1! , 2@,***    1. when we press normally, it will trigger the number, and when we press Shift together, it will trigger the symbol.    2. The effect is similar to that of ***MO(x),*** except that MO(x) can make a key contain more key value   **TO(x): After triggering this key, the keyboard switches and stays at layer x, unless it is replugged or manually changed, it will always stay at layer x**  Example:   * When both Windows and Mac OS are available, you can set the key value used in Windows to ***layer 0***, and the key value used in Mac OS to ***layer 1***. * When using it on a Windows computer, there is no need to switch * when on a Mac OS computer, use ***TO(1***) to switch the keyboard to layer 1 and switch to a Mac OS shortcut key, realizing one-key switching of multiple sets of key value configurations   **Knob change layer:**  It can only be set to the knob key, it needs to be set to layer 0, and each layer behind the knob needs to be set to the basic key ▽. After the setting is completed, turn the knob, and the keyboard will cycle through layers 0-7   * Since this key value will occupy all the layers of a knob position, it is recommended to select only one knob position and set it to Knob Change Layer+ or Knob Change Layer   **layer light**   * Some models of keyboards provide the function of layer indicators. * When the keyboard is at layer 0, the layer indicators do not light up. * When the keyboard is at 1-4, the keyboard will turn on the blue lights in the first row from left to right * When the keyboard is at 5-7, the keyboard will turn on blue lights in the second row from left to right | |

Macro Editing Tutorial ( <https://cxtkb.com/zh/macro> )

* Macro, which combines a series of actions and executes them when needed, to realize functions such as: button connecter, one-key password, etc.

**macro action**

**Reserved characters: " {", " }", " CR (carriage return)" are reserved characters, these characters will be recognized as specific meanings, and will not be output as regular characters**

|  |  |  |
| --- | --- | --- |
| **character** | Entering characters other than non-reserved characters in the edit box will be output as key values, such as: 123ab  After saving and executing, the keys 123ab will be triggered in turn, and this function can be used to realize one-key passwords, etc.  Additionally, spaces are also logged and output | Graphical user interface  Description automatically generated with medium confidence |
| **time delay** | Stay in the two key values for the specified time, in milliseconds ms. cannot appear inside ***{}*** |
| **keyboard key value** | Regular keyboard key-value, the key-value is included in ***{}*** and starts with ***KC\_***.  When Chinese or key-value is entered in ***{}***, it will match the included key-value and display it in a list.  You can also use the mouse to click to capture the key-value Then press the key on the keyboard, and then add to the edit box |
| **Keyboard key value combination key** | The key values inside ***{}*** will be triggered together, and the key values are separated by commas, such as {***KC\_LCTL***,***KC\_A***}, which means pressing ***Ctrl*** and ***A*** at the same time |
| **mouse button** | Mouse key, enter the mouse in ***{}***, and the relevant key value will appear |

**Examples of macro actions**

|  |  |
| --- | --- |
| **output characters directly**  *(for example: AB CD****)*** | * 1. After saving, you can output A space B space CD in sequence   2. The edit box will record and output spaces, so don't enter irrelevant spaces.   3. When playing the macro, it will be output according to the uppercase and lowercase when editing, so you need to pay attention to uppercase and lowercase. Because this function will be automatically implemented with Shift, sometimes you only want to output the specified key value, you need the following method. |
| **Output the specified key value**  *(for example: backspace****)*** | To output the key code, the key code needs to be written in ***{}***, such as the backspace key   * 1. Insert the cursor into ***{}*** and enter "backspace", and the corresponding key value can be automatically matched (so you don't need to remember the key value)   2. Enter ***A*** in English in ***{}*** to match the key value of ***A*** ***KC\_A*** , if it cannot be matched once, such as ***K***, just enter ***KK*** twice in a row to match.   3. The mouse button corresponds to ***MS*** or mouse, input Chinese "***mouse***" or English "***MS***" in curly brackets, it can match the mouse button value   4. If you don't know the key-value code, and you can't think of the key-value name for a while, you can use any key capture function   5. Click "click here and press any key to capture" below, then press the key you want to be recorded on the keyboard, it will be captured   6. the add button will light up   7. click the edit box with the mouse   8. select the position you want to add   9. Click Add to join. |
| **Simultaneous output of multiple key values** | sometimes you need to output a combination of keys, you need to output multiple keys at the same time, such as: ***Ctrl+C***   * 1. Enter two key values in ***{}*** and separate them with English commas, such as:   2. A ***comma*** is not required after the last key-value.   3. All key values written in the same ***{}*** will be output at the same time, which is equivalent to pressing ***Ctrl*** and ***V*** at the same time.   4. Because of this feature, delay is not supported. |
| **time delay** | Sometimes you want to have a time interval when outputting key values ​​to prevent the operation from being too fast, so you need to use a delay   * 1. Click the delay button on the interface, and a delay code, "DELAY(100)", will be added in the edit box.   2. The (100) in brackets is 100 milliseconds, which can be manually changed to the desired value, such as "DELAY(1000)" for 1 second, or "DELAY(60)" for 60 milliseconds.   3. The delay threshold is 1-30000 milliseconds, [the key interval is generally between 50-80 during normal typing] |

**script example**

Since the carriage return will not be recorded, I use the carriage return to segment, which is clearer.

|  |  |
| --- | --- |
| C{DELAY(1000)}  X{DELAY(1000)}  T{DELAY(1000)} | will output an uppercase C, an uppercase X after a delay of 1 second, and an uppercase T after a second delay |
| {KC\_C}{DELAY(1000)}  {KC\_X}{DELAY(1000)}  {KC\_T}{DELAY(1000)} | will output the C key, output the X key after a second delay, and output the T key after a second delay.  At this time, Shift will not be automatically added, just press the key value |
| help.cxt-studio.com  {DELAY(100)}  {KC\_ENT} | will output lowercase first help.cxt-studio.com, and enter Enter after a delay of 100 milliseconds |
| {KC\_LCTL,DELAY(1000),KC\_A} | code will first press Ctrl, delay for 1 second (1000 milliseconds), and then press A |

**key-value list**

| **key value** | **abbreviation** | **describe** | **Windows** | **macOS** | **Linux 1** |
| --- | --- | --- | --- | --- | --- |
| KC\_NO | XXXXXXX | empty key value | *N/A* | *N/A* | *N/A* |
| KC\_TRANSPARENT | KC\_TRNS, \_\_\_\_\_\_\_ | penetrating key | *N/A* | *N/A* | *N/A* |
| KC\_A |  | a with A | ✔ | ✔ | ✔ |
| KC\_B |  | b with B | ✔ | ✔ | ✔ |
| KC\_C |  | c with C | ✔ | ✔ | ✔ |
| KC\_D |  | d with D | ✔ | ✔ | ✔ |
| KC\_E |  | e with E | ✔ | ✔ | ✔ |
| KC\_F |  | f with F | ✔ | ✔ | ✔ |
| KC\_G |  | g with G | ✔ | ✔ | ✔ |
| KC\_H |  | h with H | ✔ | ✔ | ✔ |
| KC\_I |  | i with I | ✔ | ✔ | ✔ |
| KC\_J |  | j with J | ✔ | ✔ | ✔ |
| KC\_K |  | k with K | ✔ | ✔ | ✔ |
| KC\_L |  | l with L | ✔ | ✔ | ✔ |
| KC\_M |  | m with M | ✔ | ✔ | ✔ |
| KC\_N |  | n with N | ✔ | ✔ | ✔ |
| KC\_O |  | o with O | ✔ | ✔ | ✔ |
| KC\_P |  | p with P | ✔ | ✔ | ✔ |
| KC\_Q |  | q with Q | ✔ | ✔ | ✔ |
| KC\_R |  | r with R | ✔ | ✔ | ✔ |
| KC\_S |  | s with S | ✔ | ✔ | ✔ |
| KC\_T |  | t with T | ✔ | ✔ | ✔ |
| KC\_U |  | u with U | ✔ | ✔ | ✔ |
| KC\_V |  | v with V | ✔ | ✔ | ✔ |
| KC\_W |  | w with W | ✔ | ✔ | ✔ |
| KC\_X |  | x with X | ✔ | ✔ | ✔ |
| KC\_Y |  | y with Y | ✔ | ✔ | ✔ |
| KC\_Z |  | z with Z | ✔ | ✔ | ✔ |
| KC\_1 |  | 1 with ! | ✔ | ✔ | ✔ |
| KC\_2 |  | 2 with @ | ✔ | ✔ | ✔ |
| KC\_3 |  | 3 with # | ✔ | ✔ | ✔ |
| KC\_4 |  | 4 with $ | ✔ | ✔ | ✔ |
| KC\_5 |  | 5 with % | ✔ | ✔ | ✔ |
| KC\_6 |  | 6 with ^ | ✔ | ✔ | ✔ |
| KC\_7 |  | 7 with & | ✔ | ✔ | ✔ |
| KC\_8 |  | 8 with \* | ✔ | ✔ | ✔ |
| KC\_9 |  | 9 with ( | ✔ | ✔ | ✔ |
| KC\_0 |  | 0 with ) | ✔ | ✔ | ✔ |
| KC\_ENTER | KC\_ENT | Enter | ✔ | ✔ | ✔ |
| KC\_ESCAPE | KC\_ESC | ESC.Escape | ✔ | ✔ | ✔ |
| KC\_BSPACE | KC\_BSPC | Delete (Backspace) | ✔ | ✔ | ✔ |
| KC\_TAB |  | Tab | ✔ | ✔ | ✔ |
| KC\_SPACE | KC\_SPC | space bar | ✔ | ✔ | ✔ |
| KC\_MINUS | KC\_MINS | - with \_ | ✔ | ✔ | ✔ |
| KC\_EQUAL | KC\_EQL | = with + | ✔ | ✔ | ✔ |
| KC\_LBRACKET | KC\_LBRC | [ with { | ✔ | ✔ | ✔ |
| KC\_RBRACKET | KC\_RBRC | ] with } | ✔ | ✔ | ✔ |
| KC\_BSLASH | KC\_BSLS | \ with \| | ✔ | ✔ | ✔ |
| KC\_NONUS\_HASH | KC\_NUHS | Non-US # and ~ | ✔ | ✔ | ✔ |
| KC\_SCOLON | KC\_SCLN | ; with : | ✔ | ✔ | ✔ |
| KC\_QUOTE | KC\_QUOT | ' with " | ✔ | ✔ | ✔ |
| KC\_GRAVE | KC\_GRV,KC\_ZKHK | `Japanese ~, JIS Zenkaku/Hankaku | ✔ | ✔ | ✔ |
| KC\_COMMA | KC\_COMM | , with < | ✔ | ✔ | ✔ |
| KC\_DOT |  | . with > | ✔ | ✔ | ✔ |
| KC\_SLASH | KC\_SLSH | / with ? | ✔ | ✔ | ✔ |
| KC\_CAPSLOCK | KC\_CLCK,KC\_CAPS | Caps Lock | ✔ | ✔ | ✔ |
| KC\_F1 |  | F1 | ✔ | ✔ | ✔ |
| KC\_F2 |  | F2 | ✔ | ✔ | ✔ |
| KC\_F3 |  | F3 | ✔ | ✔ | ✔ |
| KC\_F4 |  | F4 | ✔ | ✔ | ✔ |
| KC\_F5 |  | F5 | ✔ | ✔ | ✔ |
| KC\_F6 |  | F6 | ✔ | ✔ | ✔ |
| KC\_F7 |  | F7 | ✔ | ✔ | ✔ |
| KC\_F8 |  | F8 | ✔ | ✔ | ✔ |
| KC\_F9 |  | F9 | ✔ | ✔ | ✔ |
| KC\_F10 |  | F10 | ✔ | ✔ | ✔ |
| KC\_F11 |  | F11 | ✔ | ✔ | ✔ |
| KC\_F12 |  | F12 | ✔ | ✔ | ✔ |
| KC\_PSCREEN | KC\_PSCR | Print Screen | ✔ | ✔2 | ✔ |
| KC\_SCROLLLOCK | KC\_SLCK,KC\_BRMD | Scroll Lock, Brightness Reduction (macOS) | ✔ | ✔2 | ✔ |
| KC\_PAUSE | KC\_PAUS, KC\_BRK, KC\_BRMU | Pause, brightness boost (macOS) | ✔ | ✔2 | ✔ |
| KC\_INSERT | KC\_INS | Insert | ✔ |  | ✔ |
| KC\_HOME |  | Home | ✔ | ✔ | ✔ |
| KC\_PGUP |  | Page Up | ✔ | ✔ | ✔ |
| KC\_DELETE | KC\_DEL | Forward Delete | ✔ | ✔ | ✔ |
| KC\_END |  | End | ✔ | ✔ | ✔ |
| KC\_PGDOWN | KC\_PGDN | Page Down | ✔ | ✔ | ✔ |
| KC\_RIGHT | KC\_RGHT | direction right | ✔ | ✔ | ✔ |
| KC\_LEFT |  | direction left | ✔ | ✔ | ✔ |
| KC\_DOWN |  | direction down | ✔ | ✔ | ✔ |
| KC\_UP |  | direction | ✔ | ✔ | ✔ |
| KC\_NUMLOCK | KC\_NLCK | Number Lock | ✔ | ✔ | ✔ |
| KC\_KP\_SLASH | KC\_PSLS | keypad/ | ✔ | ✔ | ✔ |
| KC\_KP\_ASTERISK | KC\_PAST | keypad\* | ✔ | ✔ | ✔ |
| KC\_KP\_MINUS | KC\_PMNS | keypad- | ✔ | ✔ | ✔ |
| KC\_KP\_PLUS | KC\_PPLS | keypad+ | ✔ | ✔ | ✔ |
| KC\_KP\_ENTER | KC\_PENT | KeypadEnter | ✔ | ✔ | ✔ |
| KC\_KP\_1 | KC\_P1 | Keypad 1and End | ✔ | ✔ | ✔ |
| KC\_KP\_2 | KC\_P2 | Keypad 2and Down Arrow | ✔ | ✔ | ✔ |
| KC\_KP\_3 | KC\_P3 | Numpad 3and Page Down | ✔ | ✔ | ✔ |
| KC\_KP\_4 | KC\_P4 | Keypad 4and Left Arrow | ✔ | ✔ | ✔ |
| KC\_KP\_5 | KC\_P5 | keypad5 | ✔ | ✔ | ✔ |
| KC\_KP\_6 | KC\_P6 | Keypad 6and Right Arrow | ✔ | ✔ | ✔ |
| KC\_KP\_7 | KC\_P7 | Numpad 7and Home | ✔ | ✔ | ✔ |
| KC\_KP\_8 | KC\_P8 | Keypad 8and Up Arrow | ✔ | ✔ | ✔ |
| KC\_KP\_9 | KC\_P9 | Keypad 9and Page Up | ✔ | ✔ | ✔ |
| KC\_KP\_0 | KC\_P0 | Keypad 0and Insert | ✔ | ✔ | ✔ |
| KC\_KP\_DOT | KC\_PDOT | Keypad .and Delete | ✔ | ✔ | ✔ |
| KC\_NONUS\_BSLASH | KC\_NUBS | Non-US \and\| | ✔ | ✔ | ✔ |
| KC\_APPLICATION | KC\_APP | See application (menu key under Windows) | ✔ |  | ✔ |
| KC\_POWER |  | System Power |  | ✔3 | ✔ |
| KC\_KP\_EQUAL | KC\_PEQL | keypad= | ✔ | ✔ | ✔ |
| KC\_F13 |  | F13 | ✔ | ✔ | ✔ |
| KC\_F14 |  | F14 | ✔ | ✔ | ✔ |
| KC\_F15 |  | F15 | ✔ | ✔ | ✔ |
| KC\_F16 |  | F16 | ✔ | ✔ | ✔ |
| KC\_F17 |  | F17 | ✔ | ✔ | ✔ |
| KC\_F18 |  | F18 | ✔ | ✔ | ✔ |
| KC\_F19 |  | F19 | ✔ | ✔ | ✔ |
| KC\_F20 |  | F20 | ✔ |  | ✔ |
| KC\_F21 |  | F21 | ✔ |  | ✔ |
| KC\_F22 |  | F22 | ✔ |  | ✔ |
| KC\_F23 |  | F23 | ✔ |  | ✔ |
| KC\_F24 |  | F24 | ✔ |  | ✔ |
| KC\_EXECUTE | KC\_EXEC | implement |  |  | ✔ |
| KC\_HELP |  | help |  |  | ✔ |
| KC\_MENU |  | menu |  |  | ✔ |
| KC\_SELECT | KC\_SLCT | choose |  |  | ✔ |
| KC\_STOP |  | stop |  |  | ✔ |
| KC\_AGAIN | KC\_AGIN | redo |  |  | ✔ |
| KC\_UNDO |  | with draw |  |  | ✔ |
| KC\_CUT |  | to cut |  |  | ✔ |
| KC\_COPY |  | copy |  |  | ✔ |
| KC\_PASTE | KC\_PSTE | paste |  |  | ✔ |
| KC\_FIND |  | look up |  |  | ✔ |
| KC\_\_MUTE |  | mute button |  | ✔ | ✔ |
| KC\_\_VOLUP |  | volume up |  | ✔ | ✔ |
| KC\_\_VOLDOWN |  | volume down |  | ✔ | ✔ |
| KC\_LOCKING\_CAPS | KC\_LCAP | Caps Lock | ✔ | ✔ |  |
| KC\_LOCKING\_NUM | KC\_LNUM | Num Lock | ✔ | ✔ |  |
| KC\_LOCKING\_SCROLL | KC\_LSCR | Scroll Lock | ✔ | ✔ |  |
| KC\_KP\_COMMA | KC\_PCMM | keypad, |  |  | ✔ |
| KC\_LCTRL | KC\_LCTL | Left Ctrl Control | ✔ | ✔ | ✔ |
| KC\_LSHIFT | KC\_LSFT | Left Shift | ✔ | ✔ | ✔ |
| KC\_LALT | KC\_LOPT | Left Alt (Option) | ✔ | ✔ | ✔ |
| KC\_LGUI | KC\_LCMD, KC\_LWIN | LEFT GUI (Windows/Command/Meta key) | ✔ | ✔ | ✔ |
| KC\_RCTRL | KC\_RCTL | Right Ctrl Control | ✔ | ✔ | ✔ |
| KC\_RSHIFT | KC\_RSFT | Right Shift | ✔ | ✔ | ✔ |
| KC\_RALT | KC\_ROPT,KC\_ALGR | RIGHT ALT (Option/AltGr) | ✔ | ✔ | ✔ |
| KC\_RGUI | KC\_RCMD,KC\_RWIN | RIGHT GUI (Windows/Command/Meta key) | ✔ | ✔ | ✔ |
| KC\_SYSTEM\_POWER | KC\_PWR | system shutdown | ✔ | ✔3 | ✔ |
| KC\_SYSTEM\_SLEEP | KC\_SLEP | system sleep | ✔ | ✔3 | ✔ |
| KC\_SYSTEM\_WAKE | KC\_WAKE | system sleep |  | ✔3 | ✔ |
| KC\_AUDIO\_MUTE | KC\_MUTE | Mute | ✔ | ✔ | ✔ |
| KC\_AUDIO\_VOL\_UP | KC\_VOLU | Volume+ | ✔ | ✔4 | ✔ |
| KC\_AUDIO\_VOL\_DOWN | KC\_VOLD | Volume- | ✔ | ✔4 | ✔ |
| KC\_MEDIA\_NEXT\_TRACK | KC\_MNXT | next track | ✔ | ✔5 | ✔ |
| KC\_MEDIA\_PREV\_TRACK | KC\_MPRV | previous piece | ✔ | ✔5 | ✔ |
| KC\_MEDIA\_STOP | KC\_MSTP | stop | ✔ |  | ✔ |
| KC\_MEDIA\_PLAY\_PAUSE | KC\_MPLY | play / Pause | ✔ | ✔ | ✔ |
| KC\_MEDIA\_SELECT | KC\_MSEL | Open Media Player | ✔ |  | ✔ |
| KC\_MEDIA\_EJECT | KC\_EJCT | pop up |  | ✔ | ✔ |
| KC\_MAIL |  | open mail | ✔ |  | ✔ |
| KC\_CALCULATOR | KC\_CALC | open calculator | ✔ |  | ✔ |
| KC\_MY\_COMPUTER | KC\_MYCM | turn on the computer | ✔ |  | ✔ |
| KC\_WWW\_SEARCH | KC\_WSCH | browser - search | ✔ |  | ✔ |
| KC\_WWW\_HOME | KC\_WHOM | browser - homepage | ✔ |  | ✔ |
| KC\_WWW\_BACK | KC\_WBAK | browser - return | ✔ |  | ✔ |
| KC\_WWW\_FORWARD | KC\_WFWD | browser - forward | ✔ |  | ✔ |
| KC\_WWW\_STOP | KC\_WSTP | browser-stop | ✔ |  | ✔ |
| KC\_WWW\_REFRESH | KC\_WREF | browser - refresh | ✔ |  | ✔ |
| KC\_WWW\_FAVORITES | KC\_WFAV | Browser-Favorites | ✔ |  | ✔ |
| KC\_BRIGHTNESS\_UP | KC\_BRIU | Brightness+ | ✔ | ✔ | ✔ |
| KC\_BRIGHTNESS\_DOWN | KC\_BRID | brightness- | ✔ | ✔ | ✔ |

1. Almost all key codes can be recognized in Linux, but the key-value binding relationship is determined by the system

2. Treat it as F13-F15

3. You need to press and hold for 3 seconds and then a prompt will appear, instead of pressing and triggering immediately

4. Press and hold Shift+Option can better control the volume

5. Skip the entire track in iTunes when you tap it, and search in the current track when you hold it down

**Microsoft Surface Dial Simulation Tutorial (** [**https://cxtkb.com/zh/surfacedial**](https://cxtkb.com/zh/surfacedial) **)**

The CXT keyboard supports emulation as a Surface Dial controller, but due to hardware limitations, it does not support functions such as color rings that need to be attached to the screen to achieve.

Surface Dial only supports Windows 10 and above systems, not Mac OS, Linux, Win8 and below systems.

**key value settings**

VIA-C version 0.2.2 or later supports Surface Dial simulation, which includes support for Surface Dial's four actions of " **left-handed**", " **Right-handed**", " **click**", and " ".**Press**

Among them, the key-value map contains the SURFACE DIAL key-value list.

|  |  |
| --- | --- |
| It contains **S button**, **S Rotate + (clockwise)**, **S Rotate - (counterclockwise)** three key values, which can be set to the knob to realize Surface Dial simulation, as shown in the figure | Graphical user interface, application  Description automatically generated |
| **After being set on the knob, the S button includes:**   * **two operations of single click and long press at the same time** * **a short press triggers a single click** * **a long press triggers a long press**   **the Surface Dial roulette menu is called out.** |

|  |  |
| --- | --- |
| **Surface Dial Settings**  **To customize Surface Dial, click the Win icon in the lower left corner of the system tray, and then select "**set up**" > "**device**" > "**rotary table**".** | |
| **default functio** |  |
| **Volume** | Rotate to the left to zoom out, and to the right to zoom in. Click to mute and unmute. |
| **scroll** | Rotate left to scroll up and right to scroll down. |
| **zoom** | In Adobe Photoshop and Adobe Illustrator, rotate left to zoom out and right to zoom in. Click to fit to screen. |
| **undo** | Rotate left to step through the undo history, and right to step through the redo history. Click to perform a single undo. |
| **brightness** | Rotate to the left to darken the screen, and to the right to brighten the screen. |

|  |  |
| --- | --- |
| **custom tool** | |
| **global shortcut【Global effect】**   1. Select "***add button+"*** and select "***custom tool***" 2. choose which keyboard shortcuts you want to see when you    1. rotate left    2. rotate right    3. click   the Surface Dial. | Graphical user interface  Description automatically generated |
| **App-specific shortcut keys [When in the selected software, it will automatically switch to this configuration]**   1. Select “***Applications***” 2. “***add*** ***application***” 3. “***add*** ***tool***” 4. enter    1. custom tool name    2. right-handed shortcut    3. left-handed shortcut    4. single-click shortcut. | Text  Description automatically generated |

PS (PhotoShop) shortcut key ( <https://cxtkb.com/zh/PSshortcut> )

**canvas adjustment**

**Mac OS only supports rotating the canvas clockwise, and rotating the canvas counterclockwise conflicts with the system**

**brush adjustment**

**1 means that the value increases by 1 every time you rotate 1 grid, and 10 means that the value increases by 10 every time you rotate 1 grid**

|  |  |  |
| --- | --- | --- |
| **Opacity** | Set this key value to the knob to adjust the opacity of the brush. | It needs to be set to the clockwise and counterclockwise keys of the knob at the same time.  When turning, the opacity value of the brush will be increased or decreased according to the direction of the knob |
| **brush flow** | Set this key value on the knob to adjust the flow rate of the brush. |
| **brush smoothness** | Set this key value to the knob to adjust the smoothness of the brush. |

**When using PS shortcut keys to adjust the "opacity, flow, smoothness" of the brush, it is not limited by the system**

**MIDI Controller Instructions (** [**https://cxtkb.com/zh/midi**](https://cxtkb.com/zh/midi) **)**

|  |  |
| --- | --- |
| After turning on the VIA-C and connecting the keyboard, if the model number on the upper right corner is "***Model + MIDI***", it supports this function.  If it is "***Model + DIAL***", it does not support this function. You need to flash in the firmware that supports MIDI. | A screenshot of a computer  Description automatically generated with medium confidence |
| Some models of keyboards have added a ***MIDI*** controller function, which can simulate the knob as a ***MIDI CC*** controller and output the value of ***CC 0-127*** |
| **Application of MIDI in Lightroom**  After setting the MIDI key value on the knob, with MIDI2LR, the knob can be used for Lightroom color correction  MIDI2LR version 5.xxx only supports Lightroom 11 Classic or later  MIDI2LR version 4.xxx only supports Lightroom 10 Classic |
| * Set the desired CC value to the clockwise and counterclockwise keys of the knob at the same time, turn the knob, and the MIDI signal can be output. * Set the CC value to the clockwise key position of the knob, the output value will increase automatically, set it to the counter clockwise key position, the output value will decrease automatically | |

|  |  |
| --- | --- |
| **Windows installation tutorial** | **Mac OS side installation tutorial** |
| 1. Select the corresponding version of MIDI2LR to download according to the currently used Lightroom    1. Windows MIDI2LR 5.x Download link：<https://cxt-studio.lanzouf.com/iwKf802c2z3a>    2. Windows MIDI2LR 4.x Download link：<https://cxt-studio.lanzouf.com/izD8902c3udg> 2. Download MIDI2LR-x.x.x.x-windows-installer.exe to any directory that can be foun 3. If you are using Lightroom at this time, please close it now, then open the exe file you just downloaded, double-click to open and install it 4. There is no need to make special settings on the Windows side, and it can be used after installation | 1. Select the corresponding version of MIDI2LR to download according to the currently used Lightroom    1. Mac OS MIDI2LR 5.x Download link：<https://cxt-studio.lanzouf.com/iVFc602c2z0h>    2. Mac OS MIDI2LR 4.x Download link：<https://cxt-studio.lanzouf.com/iF7rS02c3ufi> 2. Will MIDI2LR-x.x.x.x-osx-installer.dmg Download to any directory you can find 3. If you are using Lightroom at this time, please close it now, then open the dmg file you just downloaded, and double-click to open it 4. After opening, a new interface pops up, double-click the MIDI2LR icon in the pop-up interface to start the installation 5. Then confirm all the way, the default path is usually suitable for most users 6. If you need to manually load, then manually select the path during installation, remember this path, add it in Lightroom-File-Plug-in, select MIDI2LR.lrplugin in this path 7. After the installation is complete, you can open Lightroom for testing. At this time, MIDI2LR should start with Lightroom, and the installation is successful. 8. If MIDI2LR does not start after starting Lightroom, and the plug-in is displayed as unavailable in the file-plug-in tool, then the version is usually wrong. 9. On Mac OS Mojave or later, when using MIDI2LR for the first time, an accessibility authorization prompt may appear 10. Enter System Preferences - Security and Privacy - Privacy - Accessibility, and check MIDI2LR on the right |

|  |  |
| --- | --- |
| **Brief tutorial** | Graphical user interface, application  Description automatically generated |
| 1. Go to VIA-C first, and set the knob to MIDI CC value. Note that the key values need to be set in pairs, clockwise and counterclockwise need to set the same CC value, clockwise means increase, counterclockwise means decrease, if If only one is set, it cannot be used normally 2. 2. Open Lightroom, wait for the MIDI2LR interface to pop up, turn the knob, and a new line will appear in the MIDI2LR interface   The MIDI command on the left is the CC value just set for the knob, and the corresponding LR command is on the right. Click to select the desired value from the pop-up list. After setting, return to Lightroom and turn the knob to take effect  If the keyboard is re-plugged or the CC value is modified during use, MIDI2LR may not respond. At this time, enter Lightroom-File-Plug-in Tool Additional Information-MIDI2LR-Close the application and then start the application according to this path, you can up |

COMMON PROBLEMS

**common problems (** [**https://cxtkb.com/zh/faq**](https://cxtkb.com/zh/faq) **)**

**1. The keyboard light is always on after shutdown**

* **This problem is common in ASUS, Gigabyte, MSI and other motherboards. The reason is that the motherboard has enabled the USB continuous power supply after shutdown by default, and some models have enabled the keyboard wake-up function after shutdown (you can press the specified key on the keyboard to turn it on after shutdown)**
* [ **ASUS Motherboard** ]: Asus notebook or mainframe encounters the problem that the keyboard light is still on after shutdown, follow this tutorial to set it up: <https://rog.asus.com.cn/support/FAQ/1042220>
* [ **Gigabyte motherboard** ]: Press the **DEL**button up, switch to the **Power**page, you can see the **ErP**options, the default is **Disabled**, change **Enabled**, then press the **F10**warranty to modify and restart.
* [ **MSI motherboard** ]: Press **F11**to enter the BIOS interface when starting up, the default is **EZ mode**, please press **F7**to enter the advanced mode, then select **SETTINGS**- **Advanced**- **Power Management Setup**- **ErP Ready**, change to **Enabled**, and then press **F10**save to modify.
* **After Gigabyte or MSI operation, if it still does not take effect. It is also necessary to further turn off the fast startup function of the system.**
* 【**Windows 10**】: <http://www.ujiaoshou.com/xtjc/094135978.html>
* 【**Windows 11**】: <https://blog.csdn.net/wuquan_1230/article/details/124238149>

**2. After restarting, you need to re-plug the keyboard to use it normally**

* The default firmware of the keyboard contains many functions. When some motherboards are turned on, they will self-check all peripherals. There are few drivers in the BIOS, so the initialization is easy to fail, so that the USB port is unavailable after entering the system. After re-plugging and re-initializing the USB port by the system, the function will be normal.
* Flashing in **No MIDI firmware** resolves the issue. [If the firmware is not available on the website, you can contact customer service to obtain it]

**3. When installing VIA-C under Mac OS, it prompts that the developer cannot be verified**

* Since I did not purchase a certificate from Apple and signed it on the App Store, the software will prompt "unable to verify the developer of xxx" when installing the software.
* After the prompt appears, press the " **Command+Space**" key on the Mac keyboard, and "Focused Search" will pop up on the interface, enter "terminal" in it, and open
* Enter " " in the terminal **sudo spctl --master-disable**, do not include double quotes, please pay attention to spaces, it is best to use copy, do not enter manually
* After the input is complete, press Enter, a prompt will appear **password**, and then enter your user password (the password entered when the user's avatar appears after turning on the machine). There is no prompt during the password input process. After the input is completed, press Enter directly without any errors, which means success. If the prompt is still displayed **password**, the password just now is wrong, and you need to re-enter the password.
* After the command input is complete, it can be installed normally **VIA-C**.