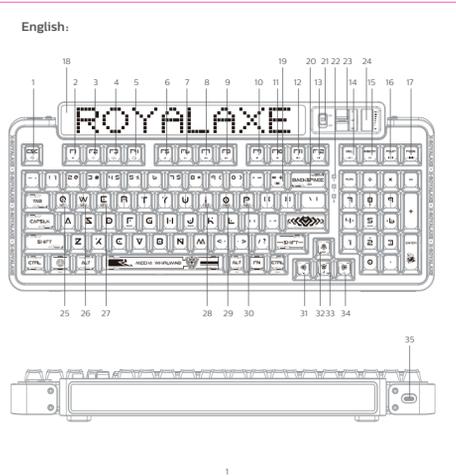




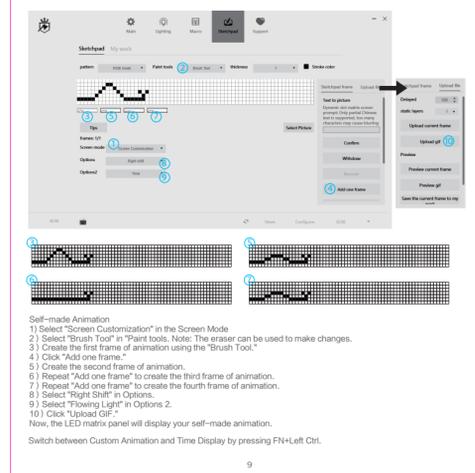
XL98  
BT 3.0/BT 5.0/2.4G/Wired Three Mode Mechanical Gaming Keyboard

USER MANUAL

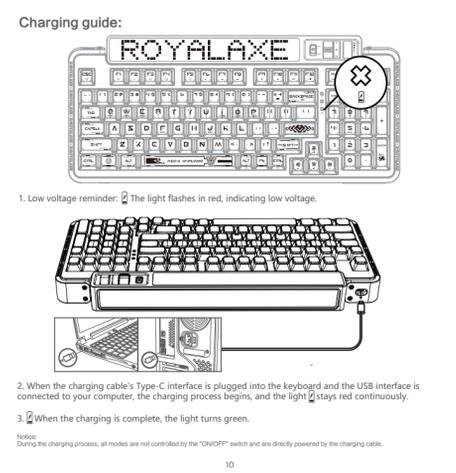


English:

- Function overview of the keyboard**
- Fn + : Reset
  - Fn + : Screen brightness +
  - Fn + : Screen brightness -
  - Fn + : Multi screen display
  - Fn + : Back to the desktop
  - Fn + : Media Player
  - Fn + : Play/Pause
  - Fn + : Prev song
  - Fn + : Next song
  - Fn + : Mute
  - Fn + : Volume +
  - Fn + : Volume -
  - Fn + : Input method switching
  - Fn + : RGB light switch
  - Fn + : Switch the LED matrix panel lighting effect
  - Fn + : LED matrix panel On/Off switch
  - Fn + : RGB LED matrix panel
  - Fn + : Battery indicator
  - Fn + : Monochromatic light switching
  - Fn + : ON/OFF power switch
  - A : Caps lock indicator
  - Num lock indicator
  - Low battery indicator
  - Wired mode
  - 2.4G wireless mode
  - BT Bluetooth mode
  - Volume wheel



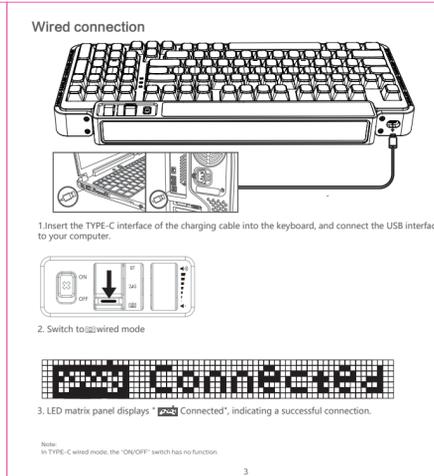
- Self-made Animation**
- Select "Screen Customization" in the Screen Mode
  - Select "Brush Tool" in "Paint tools. Note: The eraser can be used to make changes.
  - Create the first frame of animation using the "Brush Tool."
  - Click "Add one frame."
  - Repeat "Add one frame" to create the third frame of animation.
  - Repeat "Add one frame" to create the fourth frame of animation.
  - Select "Right Shift" in Options.
  - Select "Flowing Light" in Options 2.
  - Click "Upload GIF."
- Now, the LED matrix panel will display your self-made animation.
- Switch between Custom Animation and Time Display by pressing FN+Left Ctrl.



**Charging guide:**

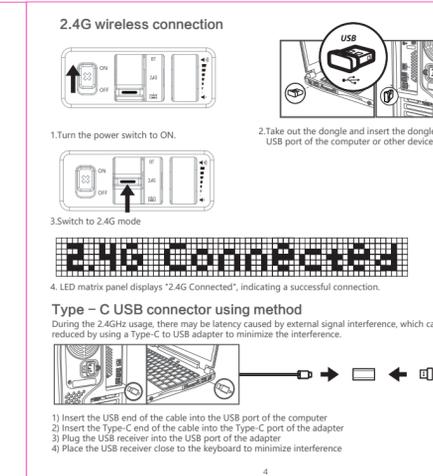
- Low voltage reminder: The light flashes in red, indicating low voltage.
  - When the charging cable's Type-C interface is plugged into the keyboard and the USB interface is connected to your computer, the charging process begins, and the light stays red continuously.
  - When the charging is complete, the light turns green.
- Note: During the charging process, all modes are not controlled by the "ON/OFF" switch and are directly powered by the charging cable.

- Custom driver**
- For custom mode please go to the following URL to download official driver.  
<https://www.protoarc.com>
- Note: The driver can only be used in wired and 2.4G mode.
- Technical specifications**
- Connection methods: Wired / 2.4GHz / Bluetooth 3.0 / Bluetooth 5.0
  - Wireless range: 2.4GHz(100-15 meters), Bluetooth(3300-10 meters)
  - Current and voltage: 5V = 500mA(max)
  - Keyboard type: 98
  - Keyboard material: PBT
  - Mechanical switch lifespan: 100 million times
  - Lithium battery capacity: 800mAh
  - Keyboard size: 15.6" x 6.8" x 1.4"
  - Weight: 3.96lbs
- System requirement**
- 1 x USB port
  - Bluetooth 3.0/Bluetooth 5.0
  - Windows: 7/Windows 8/Windows 10 or later.
  - Android: 3.2 and above; Mac: OS 10.5 or later
- Note: Multimedia functions are partially invalid in different OS versions.
- Trouble shooting**
- Ensure that the product's USB wireless receiver is properly inserted into the computer's USB port.
  - Ensure that your computer meets the minimum system requirements.
  - If the product and the wireless receiver are beyond the effective connection distance, please reduce the distance between the product and the receiver.
- Attention**
- For cleaning, please use dry, soft cotton fabric, etc.
  - Do not fold or bend the product.
  - Do not forcefully disassemble the product.
  - Avoid getting the product wet, exposed to direct sunlight, or near open flames.
  - Do not directly rinse with water.
  - The keyboard is designed to be charged with a rated voltage of 5V based on the USB protocol. Please use the computer's USB interface for charging and avoid using a charger to charge the keyboard.
  - During use, prevent liquids from entering the internal components, as this may cause short circuits and electrical malfunctions.



**Wired connection**

- Insert the TYPE-C interface of the charging cable into the keyboard, and connect the USB interface to your computer.
  - Switch to wired mode
  - LED matrix panel displays "Wired Connected", indicating a successful connection.
- Note: In TYPE-C wired mode, the "ON/OFF" switch has no function.

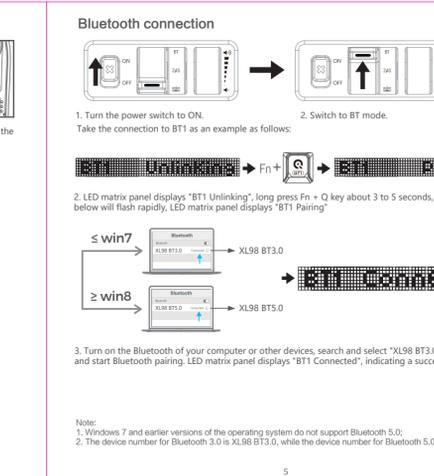


**2.4G wireless connection**

- Turn the power switch to ON.
- Take out the dongle and insert the dongle into the USB port of the computer or other devices.
- Switch to 2.4G mode
- LED matrix panel displays "2.4G Connected", indicating a successful connection.

**Type - C USB connector using method**

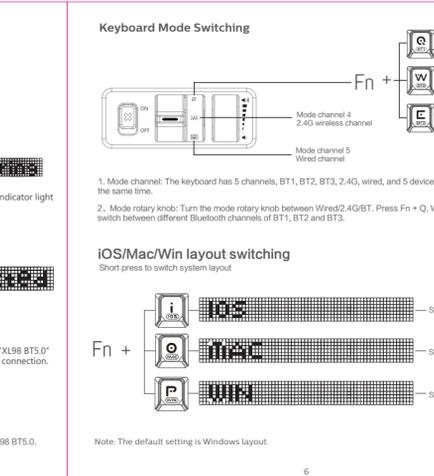
- Insert the USB end of the cable into the USB port of the computer
- Insert the Type-C end of the cable into the Type-C port of the adapter
- Plug the USB receiver into the USB port of the adapter
- Place the USB receiver close to the keyboard to minimize interference.



**Bluetooth connection**

- Turn the power switch to ON.  
Take the connection to BT1 as an example as follows:  
LED matrix panel displays "BT1 Unlinking", long press Fn + Q key about 3 to 5 seconds. The indicator light below will flash rapidly. LED matrix panel displays "BT1 Pairing"
- LED matrix panel displays "BT1 Connected", indicating a successful connection.

- Note:
- Windows 7 and earlier versions of the operating system do not support Bluetooth 5.0.
  - The device number for Bluetooth 3.0 is XL98 BT3.0, while the device number for Bluetooth 5.0 is XL98 BT5.0.



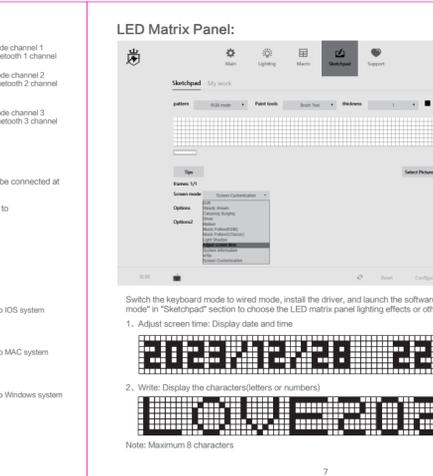
**Keyboard Mode Switching**

- Mode channel: The keyboard has 5 channels, BT1, BT2, BT3, 2.4G, wired, and 5 devices can be connected at the same time.
- Mode rotary knob: Turn the mode rotary knob between Wired/2.4G/BT. Press Fn + Q, W or E to switch between different Bluetooth channels of BT1, BT2 and BT3.

**iOS/Mac/Win layout switching**

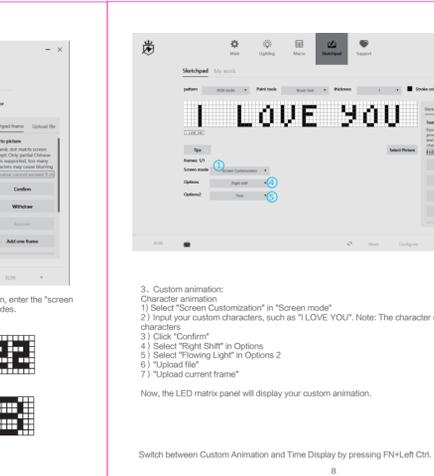
Short press to switch system layout

- Fn + : Switch to iOS system
  - Fn + : Switch to MAC system
  - Fn + : Switch to Windows system
- Note: The default setting is Windows layout.



**LED Matrix Panel:**

- Switch the keyboard mode to wired mode, install the driver, and launch the software. Then, enter the "screen mode" in "Sketchpad" section to choose the LED matrix panel lighting effects or other modes.
- Adjust screen time: Display date and time
  - Write: Display the characters(letters or numbers)
- Note: Maximum 8 characters



- Custom animation: Character animation
  - Select "Screen Customization" in "Screen mode"
  - Input your custom characters, such as "I LOVE YOU". Note: The character count should be within 13
  - Click "Confirm"
  - Select "Flowing Light" in Options
  - "Upload file"
  - "Upload current frame"
- Now, the LED matrix panel will display your custom animation.
- Switch between Custom Animation and Time Display by pressing FN+Left Ctrl.



**Important safety and compliance information**

**Disposal of product and packing material**

Waste Electrical and Electronic Equipment (WEEE)

This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead, it is your responsibility to dispose of your waste responsibly by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste protect the environment. For more information about where you can drop off your waste equipment for recycling, please contact the local city office, the household waste disposal service or the shop where you purchased the product.

**CE Declaration of Conformity**

This device complies with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility Directive (2004/108/EC), Radio directive (2014/53/EU) and Radio Equipment Directive (2014/53/EU) for Radio Equipment.

This product has been tested and found to comply with the harmonized standards for Information Technology Equipment, these harmonized standards published under Directive of Official Journal of the European Union.

**Federal Communications Commission (FCC) Notice**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE - CAUSING EQUIPMENT REGULATIONS.**

**FCC Compliance Statement**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Commissio Federale de Communication**

Cet équipement a été testé et déclaré conforme aux limites des appareils numériques de classe B, aux termes de l'article 15 Des règles de la FCC. Ces limites sont conçues de façon à fournir une protection raisonnable contre les interférences nuisibles dans le cadre d'une installation résidentielle.

CET appareil produit, utilise et peut émettre des hyperfréquences qui, si l'appareil n'est pas installé ou utilisé selon les consignes données, peuvent causer des interférences nuisibles aux communications radio. Cependant, rien ne peut garantir l'absence d'interférence dans le cadre d'une installation particulière. Si cet appareil est la cause d'interférences nuisibles pour la réception des signaux de radio ou de télévision, on est encouragé à tenter de corriger la situation en utilisant l'une ou plusieurs des mesures suivantes:

- Reorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur un circuit différent de celui auquel le récepteur est connecté.
- Demander à l'électronicien ou au technicien chevronné en radio/télévision.

Toutes modifications rigoureuses qui ne sont pas approuvées par le fabricant peuvent rendre l'équipement inapte à fonctionner.

**CE APPAREIL NUMÉRIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BRUILEUR OU CANADA.**

The serial number filled in the form must match the actual product. This certificate is the primary document for after-sales service, so please keep it safe. If you need technical support, please present this warranty card, and we will provide quality and professional services.

Dear customer,	
Thank you for purchasing ROYALAXE x ProtoArc products. To ensure you receive reliable after-sales service, please read the following instructions carefully. The product warranty period is valid for one year from the date of purchase (the date of receipt of the return receipt and the invoice date of the buyer).	
The following situations are not covered by the after-sales service:	
<ol style="list-style-type: none"> <li>Inability to provide a valid warranty card and invoice (excluding those that can prove the product is within the valid warranty period) or any unauthorized alteration of the warranty.</li> <li>The product model and serial number on the warranty card do not match the physical product or lack the distributor's seal.</li> <li>Alteration, removal, or illegibility of the model number, serial number, or production date code on the product.</li> <li>Defects resulting from excessive use outside the intended purpose, such as non-stop use in a commercial environment.</li> <li>Damage caused by not using the product in accordance with the provided instructions.</li> <li>Damage caused by the use of pirated software or computer viruses during use.</li> <li>Damage caused by accidents, unauthorized repair, or service from unapproved vendors.</li> <li>Damage caused by force majeure.</li> <li>Product malfunction due to accidental disconnection, signal interference, or other influencing factors during use.</li> <li>Normal wear and tear defects or defects in consumable parts by nature.</li> <li>The product not functioning properly because it was not originally designed, manufactured, or approved for use in the country where you use the product, which might occur when you imported the product.</li> <li>If the product functions you purchased are defective or cannot be used normally, please contact your local retailer.</li> </ol>	
The serial number filled in the form must match the actual product. This certificate is the primary document for after-sales service, so please keep it safe. If you need technical support, please present this warranty card, and we will provide quality and professional services.	
Commodity information	Name Place of origin Model No. Serial No.
User info	Name Address Tel. Postcode
Sales info	Retailer Address Tel. Postcode Sale date Invoice No. Stamp & Signature
Dear customer, the above information is to be filled in by the seller. Please cooperate with us. Thank you! The following information shall be filled in by the maintenance agency and returned to the customer.	
Maintenance info	Maintenance company name Address Tel. Postcode Model No. Date Signature



**Customer Support :**  
Email: support@protoarc.com

Co-created by ProtoArc x RoyalAxe  
Manufacturer: Dongguan Lingjie Electronics & Technology Co., Ltd  
Address: No. 23 Zhenxing North Road, Xiegang Town, Dongguan, Guangdong, China  
Web: <https://www.protoarc.com>

