

# KEYKORTEX™

INTEGRATED ON-BOARD PROGRAMMING MODULE

## freedom

FREEDOM OF MOVEMENT

### Zergotech Freedom KEYKORTEX Programming Guide

## YOUR KEYBOARD, YOUR WAY

Version 1.40.00730 or later

Model: ZFR-006  
Zergotech Freedom  
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## KeyKortex Programming Macros

Press and hold below key combinations to access the macros:

Operating System Switch (WIN or MAC)	Left Num Shift + Left FN Shift + Del, for 5 seconds (option 2)
Keyboard Select	Left Num Shift + Left FN Shift + TAB, for 2 seconds
Swap Macro	Left Num Shift + Left FN Shift + F1, for 2 seconds
Copy Macro	Left Num Shift + Left FN Shift + F2, for 2 seconds
Move Macro	Left Num Shift + Left FN Shift + F3, for 2 seconds
Erase Macro	Left Num Shift + Left FN Shift + F4, for 2 seconds
Simultaneous Combination Macro	Left Num Shift + Left FN Shift + F5, for 2 seconds (option 1)
Sequential Combination Macro	Left Num Shift + Left FN Shift + F5, for 2 seconds (option 2)
Restore Macro	Left Num Shift + Left FN Shift + ESC for 2 seconds
Master Reset Macro	Left Num Shift + Left FN Shift + Del, for 5 seconds (option 1)
Programming Guidance On/Off	Left Num Shift + Left FN Shift + F6 for 2 seconds
Lock Keys Beeper On/Off	Left Num Shift + Left FN Shift + F7 for 2 seconds
Toggle Right Alt Key Double Tap	Left Num Shift + Left FN Shift + F8 for 2 seconds
Freeze Keys	Left Num Shift + Left FN Shift + F12 for <1 second

**\*IMPORTANT Note** – The Freedom firmware has had updates and features added from 26 July 2020 onwards. If you have purchased a keyboard prior to 26 July 2020, some features may not be present and configurations and settings may differ.

For keyboards purchased prior to 30 July 2020, do set your PC keyboard layout to US English when programming macros to receive the correct text.

Keyboards purchased prior to 30 July 2020 may not have the ability to be ISO compatible with the ALTGR key and extra ISO Key.

For support, please email [admin@zergotech.com](mailto:admin@zergotech.com)

## 1. Introduction

KEYKORTEX is the Freedom's on-board programming module. The programming logic is integrated into the keyboard hardware and requires no added software to install. Using only a few macros, any key can be mapped to any location on any of the three layers. Up to six keys can be mapped to a single combination and placed at any key location.

KEYKORTEX's intuitive and powerful macros provide you with a great deal of flexibility to suit your ergonomic setup, personal preferences and efficiency.

## 2. Setting up your keyboard

In keeping the Freedom's programming feature software free, KeyKortex prints guidance on screen as text. This requires a standard text editor be open and active while programming.

**Important Note:** Be sure to have a basic text editor open and ready to receive text. Ensure you choose a text editor (such as Windows "Notepad"), that has no command line features or the ability to run other features of the program with hotkeys or certain text combinations. Running KeyKortex without an active basic text editor may cause unexpected behavior on your PC.

To program your keyboard without the need for a text editor, you have the option to toggle on or off the text based programming guidance by pressing and holding **Left Num Shift + Left FN Shift + F6 for 2 seconds**.

There are two primary settings and steps you need to configure before you begin using your keyboard:

STEP 2 – Configure the Freedom to match your Mac or PC operating system

STEP 3 – Configure the Freedom layout and language to match your keyboard selected in your operating system

**STEP 1 – CONFIGURE THE FREEDOM TO MATCH YOUR MAC OR PC SYSTEM**

The Zergotech Freedom gives you the flexibility to change between Mac and Windows PC modifier keys and shortcuts in an instant. You will need to configure this setting so that your keyboard setup matches your operating system.

To execute an operating system switch

Step 1. To activate, press and hold for 5 seconds: Left Num Shift + Left FN Shift + DEL

Step 2. Press F2 to select the Operating Switch Option

```

---KEYKORTEX MASTER RESET MACRO---

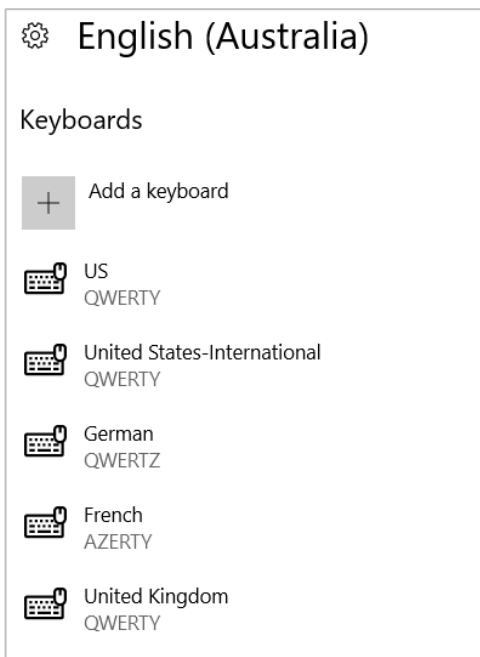
Current Config - WIN PC

-Select Reset Type-
F1 - Master Reset
F2 - OS Switch
    * OS Switch

Switching to MAC

---MASTER RESET END---
    
```

**STEP 2 – CONFIGURE THE FREEDOM TO MATCH YOUR SELECTED KEYBOARD IN YOUR OPEARTING SYSTEM**



In either Windows or Mac OS, you will already have a keyboard layout you are using.

To check and select the correct keyboard, go to your operating system’s keyboard settings and add or select your required keyboard.

The keyboard you select in your PC should match the keyboard configuration in the Freedom.

The picture on the left shows the keyboard selection settings in Windows 10.

The Freedom accommodates the below keyboards:

	Language	Layout	Freedom Configuration
1.	US English	QWERTY	ANSI-BASED
2.	German	QWERTZ	ISO-BASED
3.	French	AZERTY	ISO-BASED
4.	UK English	QWERTY	ISO-BASED

Most countries have their own specific keyboard layouts and standards (e.g QWERTY, QWERTZ, AZERTY) and special characters for their native alphabet. Australia and New Zealand use US English QWERTY. There are also two dominant keyboard standards – ANSI and ISO. Depending on the keyboard you select, the Freedom key layout will have some differences.

Selecting the correct keyboard layout in your Freedom, this ensures that you have both (i) the correct layout for your language, and that text programming guidance produces the correct characters.

NOTE: Programming guidance is produced in ENGLISH only. To enable the programming text guidance to produce the correct characters, the Freedom's internal keyboard configuration must match the keyboard selected in your operating system (in STEP 1).

Step 1. To activate, press and hold for 2 seconds: **Left Num Shift + Left FN Shift + TAB**

Step 2. You will be given a set of four options.

Select the option that produces the sentence: SAY "HELLO" TO YOUR ZERGOTECH FREEDOM.

Step 1. To activate the Keyboard Select macro, press and hold for 2 seconds:  
**Left Num Shift + Left FN Shift + TAB**

Step 1. You will be given a set of four options  
**Select the option that produces the correct characters in English**

#### EXAMPLE – SETTING YOUR KEYBOARD TO US ENGLISH QWERTY WITH ANSI LAYOUT

```
---SETUP---
```

```
-Select The Correct ENGLISH Sentence
```

```
F1 – US - SAY "HELLO" TO YOUR ZERGOTECH FREEDOM
F2 – DE – SAZ @HELLO@ TO ZOUR YERGOTECH FREEDOM
F3 – FR - SQY 3HELLO3 TO YOUR WERGOTECH FREEDO:
F4 – UK – SAY @HELLO@ TO YOUR ZERGOTECH FREEDOM
* US QWERTY ANSI
```

```
---REGISTERED---
```

EXAMPLE – SETTING YOUR KEYBOARD TO GERMAN QWERTZ WITH ISO LAYOUT

---SETUP---

-Select The Correct ENGLISH Sentence

F1 – US - SAZ ÄHELLOÄ TO ZOUR YERGOTECH FREEDOM

F2 – DE - SAY "HELLO" TO YOUR ZERGOTECH FREEDOM

F3 – FR - SQZ 3HELLO3 TO ZOUR WERGOTECH FREEDÖÖ

F4 – UK - SAZ "HELLO" TO ZOUR YERGOTECH FREEDOM

\* GERMAN ISO QWERTZ

---REGISTERED---

### 3. Master Reset Macro

This macro function gives you two options, both of which result in a return to factory defaults. The Master Reset option brings your Freedom keyboard back to a complete factory reset. All key remappings, combinations, and other settings will be erased and replaced with original settings.

The Operating System switch allows you to switch between Windows PC and Mac OS keyboard layouts on the fly. Note, the settings will be restored to factory defaults on each operating system switch.

#### 1. To execute a simple Master Reset:

Step 1. To activate, press and hold for 5 seconds: **Left Num Shift + Left FN Shift + DEL**

Step 2. Press F1 to select the Master Reset Option

It could take up to 2 seconds for the factory reset to take effect.

#### EXAMPLE

```
---KEYKORTEX MASTER RESET MACRO---  
  
Current Config - WIN PC  
  
-Select Reset Type-  
F1 - Master Reset  
F2 - OS Switch  
  * Master Reset  
  
---MASTER RESET END---
```

## 4. Swap Macro

This macro swaps two keys with each other. No key is erased or created. You can swap any key on any layer, including a key that is already remapped, or has a combination mapped to it.

To swap two keys, follow the below procedure:

Step 1. To activate the swap macro, press and hold for 2 seconds:

**Left Num Shift + Left FN Shift + F1**

Step 2. Select the first key to swap:

- i. Select the layer of the first key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

Step 3. Select the second key to swap:

- i. Select the layer of the second key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

End of Swap Macro. The two keys have now been swapped.

### EXAMPLE

By way of arbitrary example, to swap the 'A' key on the Default layer with the number '5' key on the NUM layer the following process would be followed:

1. Press Left Num Shift + Left FN Shift + F1 for 2 seconds.
2. Press F1 for Default Layer
3. Press Key A (Row 4, Column 2)
4. Press F3 for Num Layer
5. Press Key 5 (Row 3, Column 9)

Result: The 'A' Key will now be found at Layer 3, Row 3, Column 9, and the '5' key will be found at Layer 1, Row 4, Column 2.



----- KEYKORTEX SWAP MACRO-----

-REGISTER FIRST KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* Default layer.

Press desired key...

\* Row 4 Column 2

-REGISTER SECOND KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* NUM layer.

Press desired key...

\* Row 3 Column 9

-----REGISTERED-----

## 5. Copy Macro

The copy macro creates a duplicate of one key and places it on another location. If there is an active key on the destination location, that key will be over-written with the newly copied key. The original source key will remain unchanged.

To copy a key, follow the below procedure:

Step 1. To activate, press and hold for 2 seconds:

**Left Num Shift + Left FN Shift + F2**

Step 2. Select the first key to copy:

- i. Select the layer of the first key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

Step 3. Select the second key to copy:

- i. Select the layer of the second key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

The key has now been copied. End of Copy Macro

### EXAMPLE

By way of arbitrary example, to copy the Up Arrow key on the Function layer to the location of the Right Shift key on the Default layer, the following process would be followed:

1. Press Left Num Shift + Left FN Shift + F2 for 2 seconds.
2. Press F2 for Function Layer
3. Press 'Up Arrow' Key (Row 3, Column 9)
4. Press F1 for Default Layer
5. Press Right Shift Key (Row 5, Column 13)

Result: The Up Arrow key will now be found at two locations: (i) Default Layer, Row 5, Column 13, and (ii) Function Layer, Row 3, Column 9.

```
-----KEYKORTEX COPY MACRO-----
```

```
-REGISTER FIRST KEY-
```

```
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
```

```
* FN layer.
```

```
Press desired key...
```

```
* Row 3 Column 9
```

```
-REGISTER SECOND KEY-
```

```
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
```

```
* Default layer.
```

```
Press desired key...
```

```
* Row 5 Column 13
```

```
-----REGISTERED-----
```

## 6. Move Macro

The move macro acts like a cut-and-paste of a key. It allows you to move a key from its original location to its destination location. The key at the origin will be erased while any existing key at the destination location will be over-written by the origin key.

To move a key, follow the below procedure:

Step 1. To activate, press and hold for 2 seconds:

**Left Num Shift + Left FN Shift + F3**

Step 2. Select the first key to move:

- i. Select the layer of the first key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

Step 3. Select the second key to move:

- i. Select the layer of the second key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

Key has now been moved. End of Move Macro

### EXAMPLE

By way of arbitrary example, to move Key 'B' from its default location to a new location on the Default Layer at Row 5, Column 7, to replace the Zergo 'Error' key, the following procedure would be followed:

1. Press Left Num Shift + Left FN Shift + F3 for 2 seconds.
2. Press F1 for Default Layer
3. Press B Key (Row 5, Column 6)
4. Press F1 for Default Layer
5. Press 'Zergo Error' Key (Row 5, Column 7)

Result: The original 'B' key is now erased and performs no action. The original 'Zergo Error' key is over-written with the 'B' key.

----- KEYKORTEX MOVE MACRO-----

-REGISTER FIRST KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* Default layer.

Press desired key...

\* Row 5 Column 6

-REGISTER SECOND KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* Default layer.

Press desired key...

\* Row 5 Column 7

-----REGISTERED-----

## 7. Erase Macro

The erase macro erases the selected key. The erased key will perform no action when pressed..

To erase a key, follow the below procedure:

Step 1. To activate, press and hold for 2 seconds: **Left Num Shift + Left FN Shift + F4**

Step 2. Select the first key to erase:

- i. Select the layer of the first key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - ESC key to exit the macro procedure
- ii. Select the key itself

Key is now erased. End of Erase Macro

### EXAMPLE

By way of arbitrary example, to erase Key 'B' from its default location at Row 5, Column 7, the following procedure would be followed:

1. Press Left Num Shift + Left FN Shift + F4 for 2 seconds.
2. Press F1 for Default Layer
3. Press B Key (Row 5, Column 6)

Result: The original 'B' key is now erased and performs no action.

```

----- KEYKORTEX ERASE MACRO-----

-REGISTER KEY-
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
  * Default layer.
  Press desired key...
  * Row 5 Column 6

-----REGISTERED-----

```

## 8. Combination Macro

The combination macro allows you to record two types of key presses. Simultaneous key combinations, and Sequential key combinations.

Simultaneous key combinations have all keys pressed at the same time, with no key release between each registered keys.

Sequential key combinations have no keys held with each key being pressed and released in sequence.

You can record up six keys in these combination types. This can be useful for recording personalized shortcuts for more efficient computing or gaming. You can record up to 50 different combination sets.

The macro will require the selection of each key individually. If your chosen combination has less than 6 key presses, you will need to press F5 to skip forward to mapping the combination to your desired key location.

### SIMULTANEOUS KEY COMBINATION

To record either combination type, follow the below procedure:

Step 1. To activate, press and hold for 2 seconds:

**Left Num Shift + Left FN Shift + F5**

Step 2. Select the combination type:

- i. Select combination type:
  - F1 to select Simultaneous Key Presses
  - F2 to select Sequential Key Presses

Step 3. To select keys in your chosen combination:

- ii. Select the layer of the key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - F5 to skip forward and proceed to mapping the combination (available only after registering the first two keys)
  - ESC key to exit the macro procedure
- iii. Select the key itself

Step 4. Repeat to continue selecting any keys as part of your combination, up to six selections.

Step 5. For combinations less than six keys, **press F5** to proceed to mapping the combination and follow the below steps:

Step 6. Select the key to which you will map your combination:

- i. Select the layer of the key:
  - F1 to select layer 1 (Default Layer)
  - F2 to select layer 2 (Function Layer)
  - F3 to select layer 3 (Num Layer)
  - F5 to skip forward and proceed to mapping the combination (available only after registering the first two keys)
  - ESC key to exit the macro procedure
- ii. Select the key itself

The key combination is now recorded and mapped to selected key. End of Combo Macro.

### SIMULTANEOUS COMBINATION EXAMPLE

By way of arbitrary example, to map CTRL+ALT+Delete to the FN+Escape key, the following procedure would be followed:

1. Press Left Num Shift + Left FN Shift + F5 for 2 seconds.
2. Press F1 for Simultaneous Key Combination
3. Press F1 for Default Layer
4. Press CTRL Key (Row 6, Column 1)
5. Press F1 for Default Layer
6. Press ALT Key (Row 6, Column 3)
7. Press F1 for Default Layer
8. Press Delete Key (Row 2, Column 1)
9. **Press F5** to skip forward and map combination to key
10. Press F2 to select FN Layer
11. Press Escape Key (Row 1, Column 1)

```
----- KEYKORTEX COMBO MACRO-----
```

```
Select Combination Type
```

```
F1 – Simultaneous Key Presses
```

```
F2 – Sequential Key Presses
```

```
  * Simultaneous Key Presses.
```

```
-REGISTER FIRST KEY-
```

```
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
```

```
  * Default layer.
```

```
Press desired key...
```

```
  * Row 6 Column 1
```

```
-REGISTER SECOND KEY-
```

```
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
```

```
  * Default layer.
```

```
Press desired key...
```

```
  * Row 6 Column 3
```

```
-REGISTER THIRD KEY-
```



```
F1 Default Layer. F2 FN Layer. F3 NUM Layer. F5 to skip and map combo.
  * Default layer.
  Press desired key...
  * Row 2 Column 1
```

```
-REGISTER FOURTH KEY-
```

```
F1 Default Layer. F2 FN Layer. F3 NUM Layer. F5 to skip and map combo.
```

```
-----COMBO RECEIVED. MAP TO KEY-----
```

```
-REGISTER KEY-
```

```
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
```

```
  * FN layer.
```

```
  Press desired key...
```

```
  * Row 1 Column 1
```

```
-----REGISTERED-----
```

NOTE: This combination will produce the CTRL and ALT and DELETE pressed and held at the same time. On a Windows operating system, this combination shortcut will lock your PC.

## SEQUENTIAL KEY COMBINATION EXAMPLE

By way of arbitrary example, to map CTRL+ALT+Delete keys in a sequence to the FN+Escape key, the following procedure would be followed:

1. Press Left Num Shift + Left FN Shift + F5 for 2 seconds.
2. Press F2 for Sequential Key Combination
3. Press F1 for Default Layer
4. Press CTRL Key (Row 6, Column 1)
5. Press F1 for Default Layer
6. Press ALT Key (Row 6, Column 3)
7. Press F1 for Default Layer
8. Press Delete Key (Row 2, Column 1)
9. **Press F5** to skip forward and map combination to key
10. Press F2 to select FN Layer
11. Press Escape Key (Row 1, Column 1)

----- KEYKORTEX COMBO MACRO-----

Select Combination Type

F1 – Simultaneous Key Presses

F2 – Sequential Key Presses

\* Sequential Key Presses.

-REGISTER FIRST KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* Default layer.

Press desired key...

\* Row 6 Column 1

-REGISTER SECOND KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* Default layer.

Press desired key...

\* Row 6 Column 3

-REGISTER THIRD KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer. F5 to skip and map combo.

\* Default layer.

Press desired key...

\* Row 2 Column 1

-REGISTER FOURTH KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer. F5 to skip and map combo.

-----COMBO RECEIVED. MAP TO KEY-----

-REGISTER KEY-

F1 Default Layer. F2 FN Layer. F3 NUM Layer.

\* FN layer.

Press desired key...

\* Row 1 Column 1

-----REGISTERED-----

NOTE: This combination will produce CTRL press and release, ALT press and release, Delete press and release. On a windows operating system, this will not lock your PC.

## 9. Restore Macro

The restore macro returns a selected key back to its default configuration. If the key has been remapped, or replaced with a combo, the restore macro will over-write these changes with the default layout.

To restore a key, follow the below procedure:

Step 1. To activate, press and hold for 2 seconds: **Left Num Shift + Left FN Shift + ESC**

Step 2. Select the key to restore:

Select the layer of the first key:

- F1 to select layer 1 (Default Layer)
- F2 to select layer 2 (Function Layer)
- F3 to select layer 3 (Num Layer)
- ESC key to exit the macro procedure

Select the key

Key has been restored. End of Restore Macro

### EXAMPLE

By way of arbitrary example, assume the 'B' key has previously been erased and performs no function. To revert this key back to its default 'B' character, the following procedure would be followed:

1. Press Left Num Shift + Left FN Shift + ESC for 2 seconds.
2. Press F1 for Default Layer
3. Press B Key (Row 5, Column 6)

Result: The original 'B' key is now restored and performs a 'B' key stroke.

```

----- KEYKORTEX RESTORE MACRO-----

-REGISTER KEY-
F1 Default Layer. F2 FN Layer. F3 NUM Layer.
  * Default layer.
Press desired key...
  * Row 5 Column 6

-----REGISTERED-----

```

## 10. Toggle Text Based Programming Guidance

The Freedom prints characters on screen for programming guidance. This gives you helpful visual instructions allowing you to easily program your keyboard.

As this guidance types text to your computer, you should open a simple text based editor to prevent this interfering with any open programs.

To switch this guidance on or off press and hold for 2 seconds: **Left Num Shift + Left FN Shift + F6**

## 11. Toggle Lock Keys Beeper

The Lock Keys have a distinct beep sound when activated and deactivated. To turn this feature on or off, press and hold for 2 seconds: **Left Num Shift + Left FN Shift + F7**

## 12. Toggle Right Alt Key Double Tap

The Right Alt Key is a distinct keycode to the Left Alt Key. While rarely used as a separate key in US keyboard layouts, it is often used in international layouts (also known as AltGr) . To activate the Right Alt Key, you need to first enable it with this toggle macro. It is then accessed via a quick double tap on the Left Alt Key.

If you require the Right Alt Key as a dedicated key, it is also found on the FN layer under the Left Alt key, and this can be remapped separately to your desired key location.

To turn this double tap feature on or off, press and hold for 2 seconds: **Left Num Shift + Left FN Shift + F8**

## 13. Freeze Keys

Freeze Keys allows you to temporarily disable any key presses on your keyboard. This feature is very convenient when you do not wish to make key presses.

For example, you may want to place some light documents for reading directly in front of you. With standard keyboards, users would have to relocate the keyboard to provide more space for these tasks. The Freeze macro allows you to place light documents on your keyboard without needing to relocate the device.

Another use could be locking out other users, such as children or colleagues, from accessing your PC.

To Freeze Keys, press and hold **Left Num Shift + Left FN Shift + F12** for less than 1 second.

The LEDS will be activated while keys are frozen. No text guidance is produced.

## 14. Default Combinations

The Freedom is pre-installed with a few of the most commonly used Windows or Mac OS shortcuts. These shortcuts make use of the FN Shift keys which are easier to reach and activate than distant shift or control keys. These can be erased or over-written by the user at any time.

### WINDOWS OS

For Windows operating systems, the default shortcuts include:

To activate the Right ALT key, execute a double tap of the Left ALT key and hold. Ensure this option is enable with the programming macro.

- Reverse Tab: shortcut FN + TAB      Equivalent to SHIFT + TAB
- Select All:      shortcut FN + A      Equivalent to CTRL + A
- Save:      shortcut FN + S      Equivalent to CTRL + S
- Find:      shortcut FN + F      Equivalent to CTRL + F
- Undo:      shortcut FN + Z      Equivalent to CTRL + Z
- Cut:      shortcut FN + X      Equivalent to CTRL + X
- Copy:      shortcut FN + C      Equivalent to CTRL + C
- Paste:      shortcut FN + V      Equivalent to CTRL + V
- Bold:      shortcut FN + B      Equivalent to CTRL + B
- Close:      shortcut FN + W      Equivalent to CTRL + W

Upon a Master Factory Reset, any reconfigured keys will revert back to these default combinations.

### MAC OS

For Mac operating systems, the default shortcuts include:

To activate the Right Option key, execute a double tap of the Left Option key and hold. Ensure this feature is enabled with the programming macro.

- Reverse Tab: shortcut FN + TAB      Equivalent to SHIFT +TAB
- Select All:      shortcut FN + A      Equivalent to CMD + A
- Save:      shortcut FN + S      Equivalent to CMD + S
- Find:      shortcut FN + F      Equivalent to CMD + F
- Undo:      shortcut FN + Z      Equivalent to CMD + Z
- Cut:      shortcut FN + X      Equivalent to CMD + X
- Copy:      shortcut FN + C      Equivalent to CMD + C
- Paste:      shortcut FN + V      Equivalent to CMD + V
- Bold:      shortcut FN + B      Equivalent to CMD + B
- Close:      shortcut FN + W      Equivalent to CMD + W

Upon a Master Factory Reset, any reconfigured keys will revert back to these default combinations.

## 15. Programming Notes and Limitations

### REMAPPING KEYS

With the exception of Freedom's proprietary FN and NUM shift keys, the process of remapping keys and recording combinations occurs on a layer by layer basis only. You cannot move all three layers of a key to another location.

### ZERGO PROPRIETARY SHIFT KEYS

The Freedom makes use of proprietary keys which do not have standard keyboard scan codes. The Freedom's Shift Keys include the FN Shift and NUM Shift keys. As these are required to activate a certain layer, the keys must propagate through all three layers. Some limitations surround this feature including:

- When programming a Freedom Shift key, the entire key on each layer will be reprogrammed. For example, the copy of a Freedom Shift key to a target location will over-write all three layers of the target key.
- When erasing a Freedom Shift key, all three layers of the erased Zergo Shift keys will become blank.
- Likewise, when moving a Freedom Shift key, the relocated key will over-write the destination key on all three layers while simultaneously making blank its original location on all three layers.
- Freedom Shift keys can only have up to 10 instances on the keyboard.

### LOCK KEYS

Freedom Lock Keys include the FN Lock and NUM Lock keys. Special consideration is required for transitioning between the three layers of the keyboard.

- As remapping of keys is performed on a layer by layer basis, you need to take care when remapping the Freedom's Lock Keys. If you place a Freedom Lock Key on a single layer only, you will need to use the lock key in combination with the Freedom Shift Key to either enter, or exit, the lock layer.
- Each lock key, including the Zergo Lock Keys and standard Caps Lock and Scroll lock keys, can only have up to 10 instances each on the keyboard.

### COMBINATIONS

The features and limitations of programming combinations include:

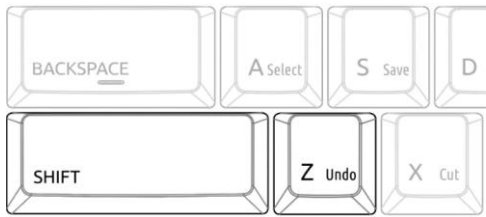
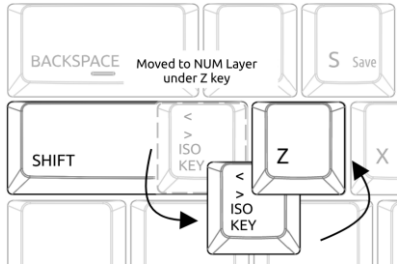
- The recording of up to 50 combinations. Combinations can be placed on any key and on any layer. Mapping more than 50 keys will be rejected.
- Each combination can comprise of up to six keys, the maximum allowed by USB protocol.
- An attempt to record a combination with a repeated key will only have one instance of that key sent by the keyboard.



# LAYOUTS

## 16. US ANSI and International ISO Keyboard Configurations

American National Standards Institute (ANSI) and International Organization for Standardization (ISO) refer to two physical key layout standards of Western alphabet keyboards. The US English keyboard employs the ANSI layout, while ISO configuration is used in the German, French and UK keyboards.

The ISO layout has an extra “ISO Key” and the “ALTGR” modifier key. The ISO Key is simply an extra key with additional characters, while the ALTGR key replaces the ANSI Right ALT Key and is used to activate the third shifted character or symbol found on specific keys.

FREEDOM US ANSI BASED – NO ISO KEY	FREEDOM ISO BASED WITH ISO KEY
	
<p>The Zergotech Freedom has the same layout as the ANSI standard for the left Shift key.</p>	<p>The Zergotech Freedom has no dedicated ISO key. The ISO key is instead programmed into the NUM Layer</p>

FREEDOM US ANSI BASED – NO RIGHT ALT KEY	FREEDOM ISO BASED WITH ALTGR KEY
	
<p>For US ANSI based layout, the Freedom does not have a dedicated right ALT key. Instead, it removes the redundancy of the right ALT and replaces it with a dedicated NUM Lock key. You can still configure the keyboard for a dedicated right ALT key through the use of Macros</p>	<p>For ISO based layouts, the Freedom provides a dedicated ALTGR key in place of a dedicated NUM Lock key. You can still configure the keyboard for a dedicated NUM Lock key through the use of Macros</p>

