

freedom

FREEDOM OF MOVEMENT

Zergotech Freedom
Onboard Programming Guide

YOUR KEYBOARD, YOUR WAY

Model: ZFR-006
Zergotech Freedom
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Zergotech Pty Ltd

Introduction

The Freedom's on-board programming is powerful and flexible. With no software to install and 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.

Our intuitive macros allow you to (i) swap two keys with each other (ii) copy a key to another location (iii) move a key to another location (iv) erase any key (v) record combinations and shortcuts (vi) restore remapped keys, and finally (vii) a full keyboard reset to factory settings.

Press and hold below key combinations to access the macros:

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**

Combination Macro – **Left Num Shift + Left FN Shift + F5, for 2 seconds**

Restore Macro – **Left Num Shift + Left FN Shift + ESC for 2 seconds**

Master Reset Macro – **Left Num Shift + Left FN Shift + Delete, for 5 seconds**

PROGRAMMING GUIDANCE

To assist you with programming your keyboard, on-screen instructions will be printed on your computer screen. These instructions are printed as text so be sure to open a text editor to view.

You may switch the programming guidance on or off at any time by pressing and holding **Left Num Shift + Left FN Shift + F6 for 2 seconds**.

LOCK KEY BEEPER

By default, the keyboard comes with a beeper activated to guide you through both the programming steps and toggling lock keys.

You can switch the beeper for lock keys on or off at any time by pressing and holding: **Left Num Shift + Left FN Shift + F7 for 2 seconds**.

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:

- 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
- Redo: shortcut FN + Y Equivalent to CTRL + Y
- Close: shortcut FN + W Equivalent to CTRL + W

Upon a Master Factory Reset, any erased or over-written keys will revert back to these default combinations.

MAC OS

For Mac operating systems, the default shortcuts include:

- 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 erased or over-written keys will revert back to these default combinations.

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.

-----ENTERED KEY SWAP MACRO-----

-REGISTER FIRST KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* Default layer.

Press desired key...

* Row 4 Column 2

-REGISTER SECOND KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* NUM layer.

Press desired key...

* Row 3 Column 9

-----KEY SWAP REGISTERED-----

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.

-----ENTERED KEY COPY MACRO-----

-REGISTER FIRST KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* FN layer.

Press desired key...

* Row 3 Column 9

-REGISTER SECOND KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* Default layer.

Press desired key...

* Row 5 Column 13

-----KEY COPY REGISTERED-----

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.

-----ENTERED MOVE MACRO-----

-REGISTER FIRST KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* Default layer.

Press desired key...

* Row 5 Column 6

-REGISTER SECOND KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* Default layer.

Press desired key...

* Row 5 Column 7

-----KEY MOVE REGISTERED-----

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.

```

-----ENTERED KEY ERASE MACRO-----

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

-----KEY ERASE REGISTERED-----

```

Combination Macro

The combination macro allows you to record simultaneous key presses of up to six keys. This can be useful for recording personalized shortcuts for more efficient computing or gaming. You can record up to 50 different combinations.

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.

To record a combination, follow the below procedure:

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

Left Num Shift + Left FN Shift + F5

Step 2. To select keys in your chosen 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

Step 3. Repeat to continue selecting any keys as part of your combination, up to six selections.

Step 4. For combinations less than six keys, **press F5** to proceed to mapping the combination and follow the below steps:

Step 5. 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.

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 Default Layer

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

-----ENTERED COMBO MACRO-----

-REGISTER FIRST KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* Default layer.

Press desired key...

* Row 6 Column 1

-REGISTER SECOND KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* Default layer.

Press desired key...

* Row 6 Column 3

-REGISTER THIRD KEY-

Select a layer...

ESC to cancel. 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-

Select a layer...

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

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

-REGISTER KEY-

Select a layer...

ESC to cancel. F1 Default Layer. F2 FN Layer. F3 NUM Layer.

* FN layer.

Press desired key...

* Row 1 Column 1

-----COMBO REGISTERED-----

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.

```

-----ENTERED RESTORE MACRO-----

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

-----KEY RESTORE REGISTERED-----

```

Master Reset Macro

The Master Reset macro is a special macro to bring the Freedom keyboard back to a complete factory reset. All key remappings, combinations, and other settings will be erased and replaced with original settings.

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

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

EXAMPLE

```
-----MASTER RESET MACRO-----
```

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

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.

