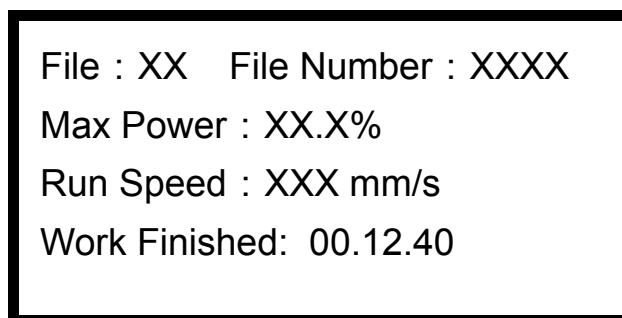
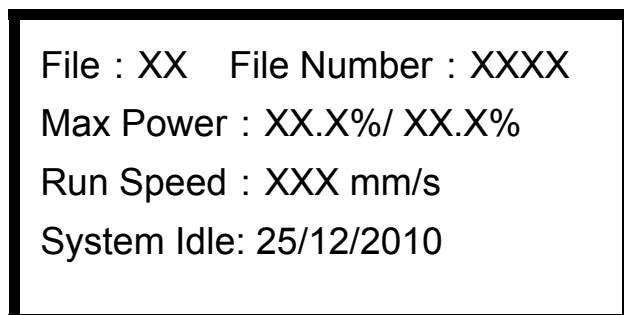




```
File : XX   File Number : XXXX
Max Power : XX.X%
Run Speed : XXX mm/s
Work Finished: 00.12.40
```

Figure: 8.1-4

The interface in Figure 8.1-1 shows when the system is idle. “File” means the number of the memory file presently selected by the operator. If it is 00, it means the memory file is not selected. “File Number” means the processing times of the current file number. “Max. Energy” and “Speed” separately mean the maximum energy and the engraving speed set on the keyboard. Maximum energy is expressed by percentage and accurate to 0.1%. The unit of processing speed is millimeter a second (mm/s). When there is a laser tube, the interface only shows the maximum energy of this tube as shown in the above figure. If there are two laser tubes that are enabled, the interface show the maximum energy of two laser tubes. The main idle interface is taken for example as shown in Figure 8.1-5. On the interface shown in Figures 8.1-1 and 8.1-4, you can press any keys on the keyboard. On the interfaces shown in Figure 8.1-2 and 8.1-3, some keys can’t respond.



```
File : XX   File Number : XXXX
Max Power : XX.X%/ XX.X%
Run Speed : XXX mm/s
System Idle: 25/12/2010
```

Figure: 8.1-5

8.2 Introduction to the Keys

(1) Reset key



On any interfaces, press the Reset key (or when the system is powered) and the mainboard will be reset. The machine will seek for the origin (configured according to the user's parameters through start-up and reset) and show the "Reset-in-progress" prompted in the interface. The machine having successfully returned to the origin, the laser head will automatically move to the setpoint set last time. If the last processing is successfully completed prior to the resetting, the system will at this time return to the interface in Figure 8.1-1; if the last processing is not completed (i.e. the power supply is cut off during the processing), the system will at this time show as follows:

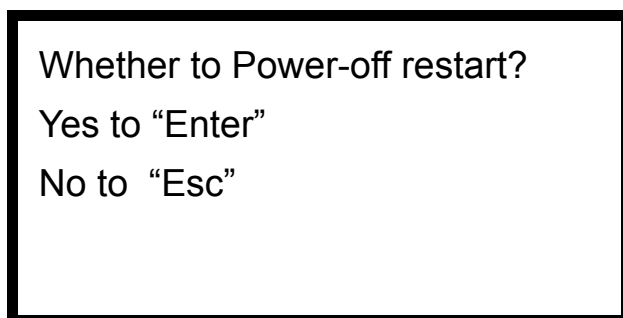


Figure: 8.2-1

Pressing the "Esc" key in this interface and this de-energizing for continuous engraving will be cancelled and the system return to the interface in Figure 8.1-1. If processing was once started, the figure uncompleted in the former processing can't be de-energized for continuous engraving; if the "Enter" key is pressed in this interface, the de-energizing for continuous engraving can be started in order to process such a figure continuously.

 Prompt	After the de-energizing for continuous engraving is started, the interface will show "Looking for cutoff point, please wait". The waiting time has something to do with the data size of last processing. The larger the data size is, the longer the search for the cutoff point by the mainboard is. Generally speaking, if the power is cut off after the figure processing of one hour, the time that the mainboard looks for the cutoff point is approximately one minute when the de-energizing for continuous engraving is started after it is powered next time.
--	---

(2) Laser key



On the system idle interface, the work finished interface, the system paused interface and the interface to prompt whether to de-energize for continuous engraving, press the “Laser” key and the laser outputs on the bursting. The time of open laser may be set. If the time is set to zero, then the outputting time is the time when the “Laser” key is pressed, that is to say, press this key for outputting and release it for blanking. If the time is not zero, such as, 100ms, then the laser flash 100ms when you push down the laser key. You can press the “Down” key on pressing the “Laser” key to start manual cutting. The laser energy of burst is the maximum energy value set on the keyboard. It is no use to press the “Laser” key on other interfaces. If the water protector is started and something wrong happens to the protector, no laser will be outputted after the laser and the interface prompts dislocation.

(3) Max. Power key



On four main interfaces (i.e. idle system, running system and suspended system, work finished interface) this key can be pressed. On pressing this key, if the manufacturer only provides a single laser tube or if there is a double-path laser tube, but the user only enables one path, it only shows the maximum energy of this-path laser tube and the interface shows the same as Figure 8.2-2. If two laser tubes are enabled together, it will show the maximum energy of two laser tubes and the interface shows the same as Figure 8.2-3.

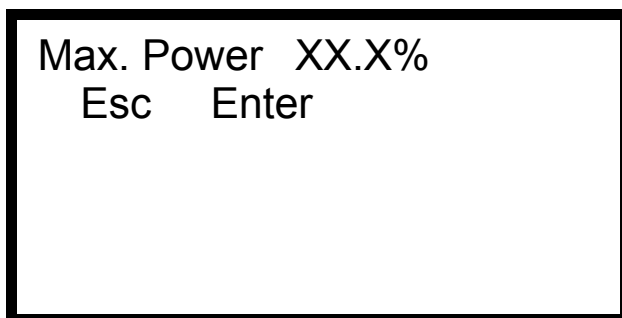


Figure: 8.2-2

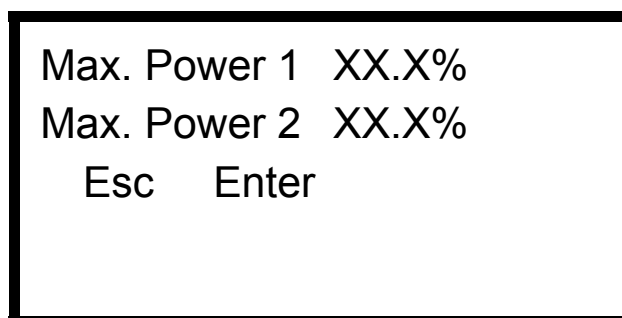


Figure: 8.2-3

(4) Min. Power key



The display interface and the operating mode of this key are similar to those of the “MaxPower” key.

(5) Speed key



On four main interfaces (i.e. idle system, running system and suspended system, work finished interface) this key can be pressed. Press this key and the interface will show the same as Figure: 8.2-4.

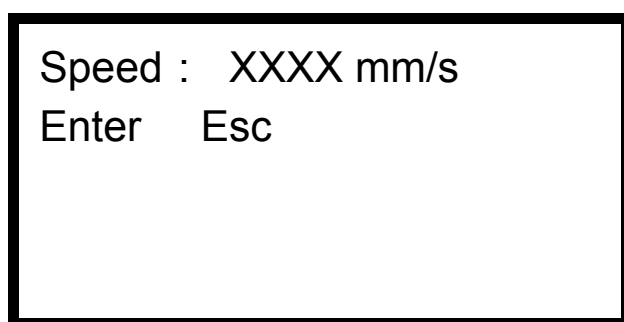
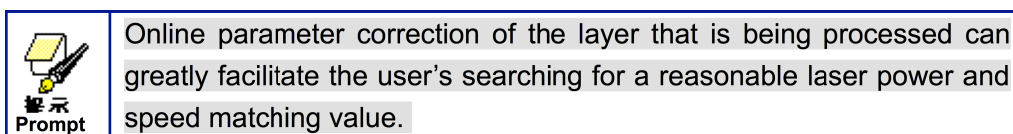


Figure: 8.2-4

The operating mode of this key is similar to that of the “MaxPower” key.

When the PC software generates the cutting/engraving data file, if a certain or all the parameters of the maximum power, the minimum power and the speed parameter are set at 0, the value set on the keyboard will be taken as the corresponding parameter in the idle state. Once the work is started, what is shown in the display interface is the parameter of the layer that is being processed now.

The power and the speed parameters corrected when the work is not started will influence the following operations: bordering, bursting and manually shifting the axle on the keyboard. If the three parameters will be modified after the work is started, it will only influence the layer that is being processed, but neither the keyboard parameters set in the idle state nor other layer parameters.



(6) File key



Press the “File” key in the idle system interface or the work finished interface and two pages will appear. Press the “Up” and “Down” key and you can turn the pages up and down. The interface will show the following in turn:

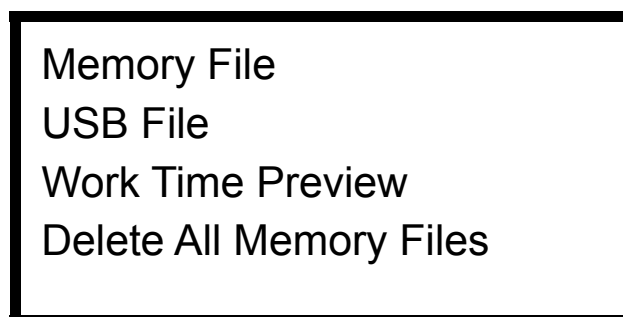


Figure: 8.2-5

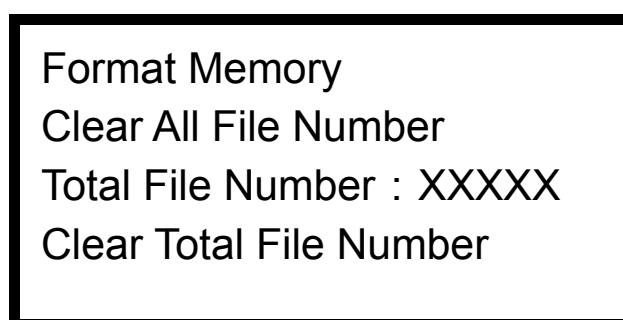


Figure: 8.2-6

Brief the following items separately:

- ◆“Memory File”: the related operations on the memory file such as processing, bordering, copying, deletion and etc.
- ◆“USB File”: the operations on USB file, such as copy to memory and deletion.
- ◆“Work Time Preview”: press this entry, the work time of the currently selected file will be calculated (you can also lower the memory file on the menu to start the work time preview feature of a certain file), calculated time according to the file size and complexity of the graphics, in general, if the actual work time is several hours, then the calculated time may require tens seconds or even more. The work time calculated is consistent with the actual working hours, accurate to the millisecond.
- ◆“Delete All Memory Files”: to delete the data of all memory files on the mainboard.
- ◆“Format Memory”: to format the memory on the mainboard. There are “Quick Format” and “Complete Format” for option. If there is some abnormality in memory, you may check the invalid block with the format function.
- ◆“Clear All File Number”: to delete the corresponding processing times to each memory file.
- ◆“Total File Number”: to show the present total times of processing by the machine.
- ◆“Clear Total File Number”: to clear and recalculate the total file number.

Move the cursor by way of the up and down directional keys to select an item first, and then press the “Enter” key to enter the submenu. On selecting “Memory File” or “USB File”, if the callee has no files, the interface will show the information of no file, otherwise it will show the numbers and names of all object files (the suffix name of object file is .rd). The processing times corresponding to this file is shown after the file name in the “Memory File” interface. Each page has four files:

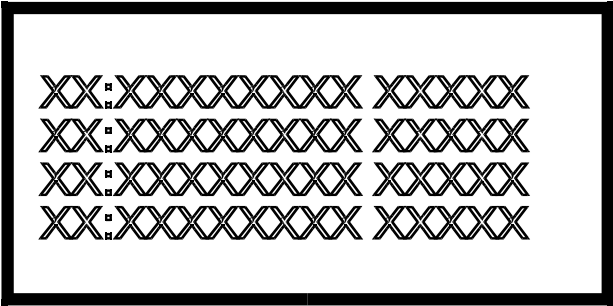


Figure: 8.2-7

Select a certain file by pressing the directional keys (move the cursor with the up and down keys and turn pages with the left and right keys) first, and then press the “Enter” key to enter the submenu. For memory file, it supports such six items as “Copy to USB”, “Run”, “Deletion”, “Work Time Preview”, “Track Frame” and “Clear File Number”.

On pressing the “Enter” key when you select the “Run” item, directly start the processing of this file and the interface shows the same as Figure 8.1-3 (Running Interface); selecting “To USB” and pressing the “Enter” key, this memory file will be copied to USB disk. If copying fails, the interface will show the error information; if copying succeeds, the system will return to the prior interface after the bell rings. On selecting the “Deletion” and pressing the “Enter” key, this file in the memory will be deleted. Selecting the “Work Time Preview” and pressing the “Enter” key, to start the work time preview feature of the certain file. If “Track Frame” is selected, the frame of the graph is previewed. Then if “Clear File Number” is selected, the work number of the certain file is set to zero.

For USB files, it supports such two options as “Copy to Memory” and “Deletion”, the operation of which is similar to that of memory file. In the operation of file copying, if the interface shows the error information, please press the “Enter” key or “Esc” key and the interface will return to the prior one.

 提示 Prompt	This system supports such file formats of USB as FAT32 and FAT16, but it can identify them when the files are put under the root directory of USB. The file name of more than 8 characters will automatically be cut out by the system. The file name that has only English letters and digits will not show when they are copied to the mainboard. The files copied from the mainboard to USB will be placed under the root directory of USB.
---	--

(7) Start/Pause key



Under the four main interfaces it is ok to press the Start/Pause key. Press this key on the system idle interface or work finished interface, the selected file will be processed. Press this key under the running system interface, and the work will be suspended. Press this key under the suspended system interface, and the suspended work will continue.

(8) Origin key



It will respond when this key is pressed under the idle system interface or the work finished interface. If the single setpoint logic is selected by the system, press this key and the mainboard will take the current X/Y-axis position of the machine as the relative origin of the figure; if the multiple setpoint logic is selected by the system, it is invalid to press this key at any time.

(9) Frame key



It is valid to press this key under the idle system interface and the work finished interface. Press this key and the bordering will be operated on the currently selected file.

(10) Esc and Enter key



Press the Esc or Enter key under different interfaces means to confirm or deny this operation.

(11) Directional Keys (Up, Down, Left and Right keys)



In addition to being used for modifying parameters and moving the cursor as abovementioned, the directional keys can be used to move the kinematic axis under such three interfaces as idle, suspended system or work finished interface. Under such three interfaces, press the Left and Right keys to move X axis and press the Up and Down keys to move Y axis. If the inching distance is set at 0, the moving time means the time of pressing this key, which means that movement starts after the one of the keys is pressed and movement stops after the keys are released. Where the inching distance is not 0, the corresponding axis will move for the corresponding inching distance after one

of the directional keys is pressed once. In the movement processing the speed can be increased or reduced automatically in order to reach the maximum/minimum coordinates. The maximum speed of key movement is the speed value set on the keyboard when the system lies idle.

 提示 Prompt	After the polarity of directional signal for each axle of the machine is adjusted well, if you press the Left key and the X axle will move rightward; and if you press the Up key and the Y axle will move down, which mean the key polarity of the axles moving to the opposite direction is not right. In such a case you should modify the key polarity of this axle.
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(12) Fn key (Function key) in the middle of directional keys



The Fn key can be pressed when the system is idle or the work is finished. On pressing this key, it will show three pages and nine entries in the following interface:

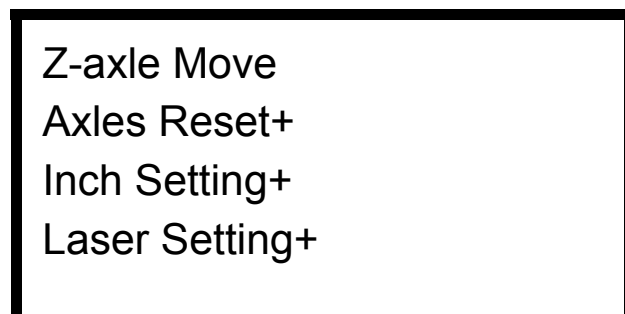


Figure: 8.2-8

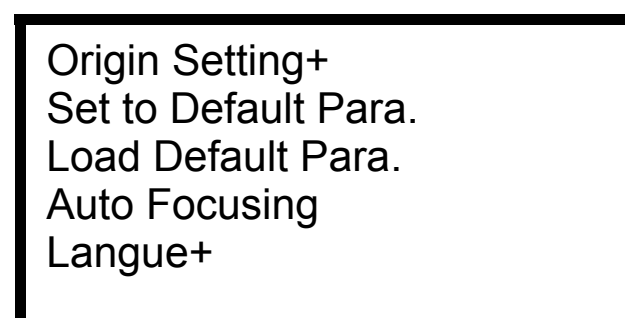


Figure: 8.2-9

1) Press the Up and Down keys to select the cursor position. When the cursor stops at “Z-axle Move”, press the Left and Right keys and the system will move the Z axle. If the inching distance is 0, Z axle will continuously move; if it is not 0, Z axle will move the well-set inching distance value.

2) When the cursor stops at “Axes Reset”, press the Enter key and it will show four entries as follows:

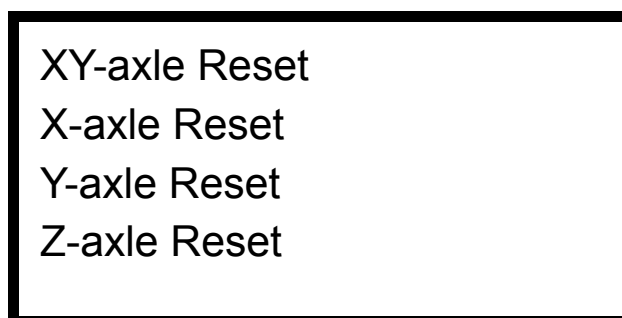


Figure: 8.2-10

Press the Up and Down keys to select the desired entry. Press the Enter key and the corresponding axes will reset (Only when the reset of this axle is activated in the manufacturer's parameters can the resetting will function). Press the Esc key to return to the prior menu.

3) When the cursor stops at “Inch Setting” or “Laser setting”, the inching distance or the Laser shot time can be set.

4) When “Origin setting” is selected, it will show below:

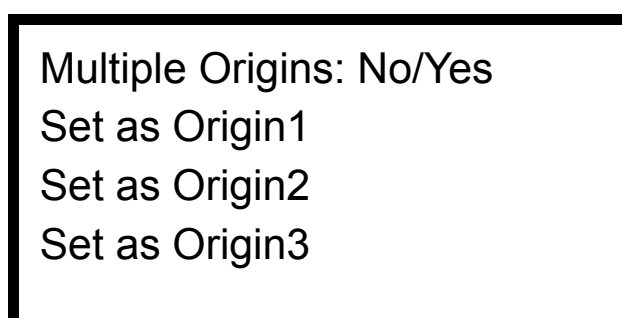


Figure: 8.2-11

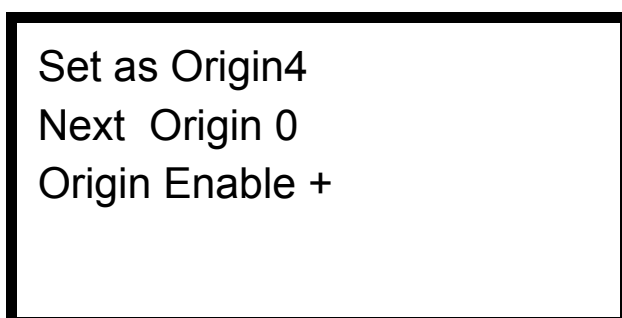


Figure: 8.2-12

- Multiple Origins: “Yes” or “No” can be selected. If you select “No”, the system will use the single-origin logic. You can press the “Origin” key and set the origin, and only this origin can become valid. If you select “Yes”, the system will use the multiple- origin logic and the “Origin” key on the keyboard become invalid. In such a case, the parameter of each origin must be set in the menu as follows.
- Set as Origin 1/2/3/4: after the multiple- origin logic is enabled, you can stop the

cursor at “Set as Origin 1/2/3/4”. Press the “Enter” key on the keyboard and the system will take the coordinate figures of current X/Y axes as the corresponding ones to the origin 1/2/3/4.

- Next Origin: there are such five digits as 0~4 for option, which are the origins to be used for the next figure. Origin 0 means the origin set by the “Origin” key on the panel in the single- origin logic. 1~4 means the serial number of the origins in the multiple- origin logic. Next origin can be modified to any one of origin 1~4, so as to control the start location of next work (the premise is that the origin is enabled), but it can’t be modified to origin 0.
- Origin Enable+: after the multiple-origin logic is enabled, the four origins can independently be prohibited and enabled.

 提示 Prompt	Once the multiple- origin logic is selected and if the serial number of the next origin is 1 and four origins are enabled, when the memory file function is started or the processing file is uploaded into the PC and this file selects “Take the Original Origin as current Origin”, the work started for each time will use different origins. The rotation order of origin is 1->2->3->4->1->2.....
---	---

5) After the “Set to Default Para” in Figure 8.2-9 is selected and the Enter key pressed, the interface will show the specific password to be entered when set as default parameter. After the manufacturer regulates all parameters of the machine well (including all manufacturer parameters and user parameters), this function can be used to store the well-regulated parameters to help users to recover the original parameters (including all manufacturer parameters and user parameters) through selecting “Load Default Para” when they regulate parameters improperly.

6) After the “Load Default Para” in Figure 8.2-9 is selected and the Enter key pressed, the “Successful Recovery” dialog box will pop up to prompt that all manufacturer parameters and user parameters are recovered successfully. You can return to the previous menu by press the Enter key.

7) When the cursor stops at “Auto Focusing”, press the Enter key to search for the focus(When there is z axes, and the z axes reset function is enabled, the auto focusing is valid); press the Esc key to return the prior menu.

8) The item “Langue” helps you to select a appropriate langue which is displayed on the panel.