



sketchbook!

**Communication Setup**

**Quick Setup Guide**

**Ver. MB2\_WIFI**

TOKYO CHOKOKU MARKING PRODUCTS CO.,LTD.

Tokyo, JAPAN

This is a translation of the original instruction and the original instruction is in Japanese.

## Introduction & Safety information

We would like to thank you for making a MarkinBOX marking machine your choice for meeting your marking and traceability needs.

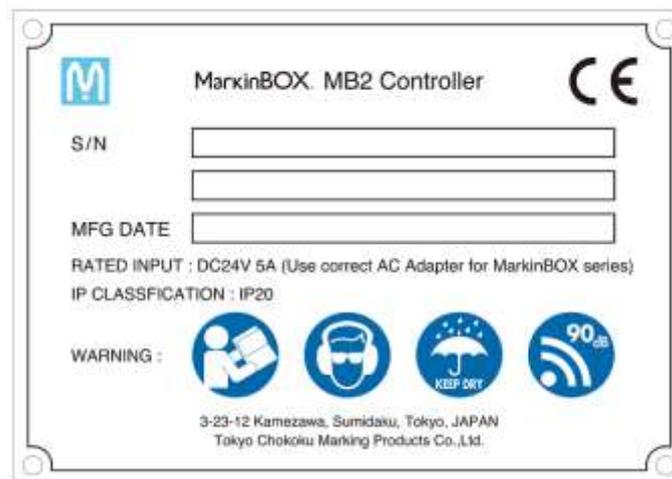
MarkinBOX is NC-Controlled marking machine to make characters with dots of pins.



To help you use your MarkinBOX, this manual contains detailed information. Please read these instructions carefully and keep this document for future reference.

### Information of the MarkinBOX

Copy of the marking plate



### Warning definition

<p>Hot</p> 	<p><b>Beware of high temperature</b></p> <p>Prolonged continued use would heat up the solenoid. This will not affect the quality of marking. However, do not touch the area around the stylus pin or the solenoid with bare hands after continued use. In particular, refrain from using the system around small children. <b>*Continued use (non-stop for one hour or more) at marking force 10 (maximum power) and Speed 1 (slowest speed) sometimes causes the surface temperature to rise to approx. 120°</b></p>
<p>Noise</p> 	<p><b>Beware of loud noise</b></p> <p>Loud noise will occur when the Marking Force is set high or depending on material properties and the shape of the workpiece (especially thin and hollow ones such as pipes). Therefore, always wear an ear plug when operating the system.</p>



<p>Water Protection</p> 	<p><b>Using near water and in a humid area is prohibited</b>  <b>MarkinBOX series are IP20 classification</b></p> <p>To prevent fire, electric shock, and damage, do not use the system around water. Also, do not touch the system with wet hands.</p>
<p>Safety</p> 	<p><b>Beware of unwearing property gears</b></p> <p>For your safety, wear an protection glass when operating the tool and wear PPE for hearing protection when operating the tool</p>

### General Power Tool Safety Warnings

**WARNING : Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**Save all warnings and instructions for future reference.**

The term “power tool” in the warnings refer to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### 1) Work area safety

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gasses or dust.** Power tools create sparks which may ignite the dust or fumes.
- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Note:

Not expected to use or produce under potentially explosive atmosphere, as well as toxic, corrosive, flammable and explosive substances. Not expected to use under ATEX.

#### 2) Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will



increase the risk of electric shock.

- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduce the risk of electric shock.
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

Note : The term “residual current device (RCD)” may be replaced by the term “grounded fault circuit interrupter (GFCI)” or “earth leakage circuit breaker (ELCB)”.

### 3) Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injury.
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- g) **If devices are provided for the connections of dust extraction and collections facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

### 4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that



cannot be controlled with the switch is dangerous and must be repaired.

- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
  - d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
  - e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools
  
  - f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
  - g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- 5) **Service**
- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

**WARNING : Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

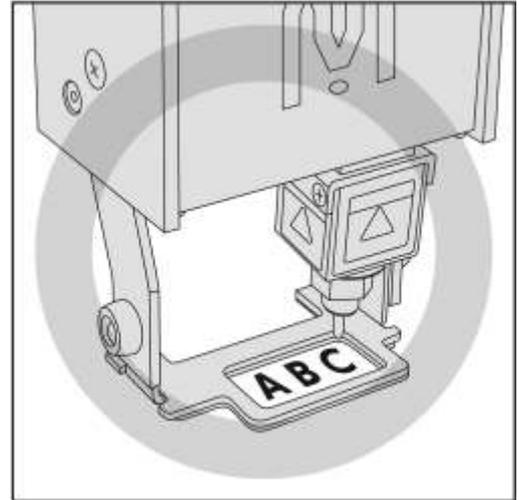
**Save all warnings and instructions for future reference.**



Contains precautions against actions that are prohibited at all times. Negligence could result in death or serious injury.

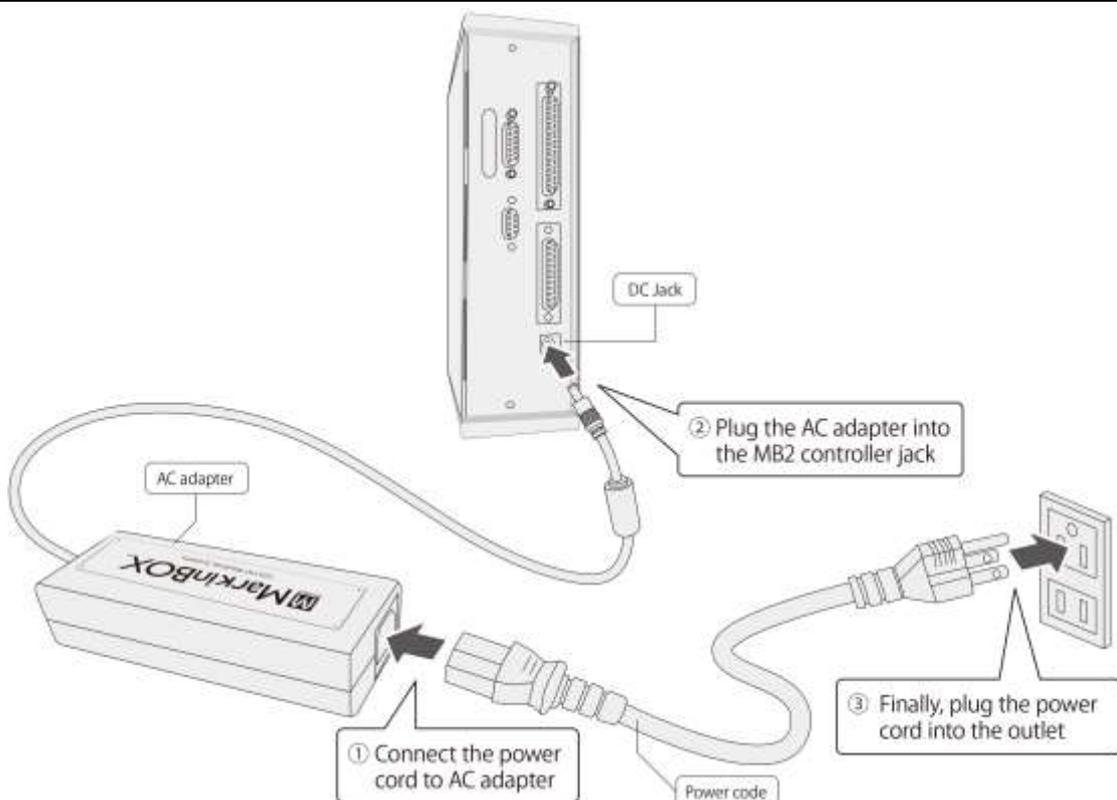
### Using system for purposes other than marking is prohibited

The MarkinBOX Series is a marking machine. Using the machine for purposes other than marking may result in unexpected accidents and injury, which will not be covered by the warranty.



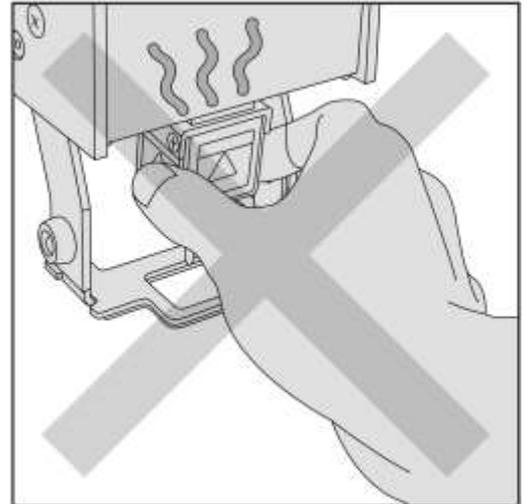
### Handle power with care

When you connect the AC adapter to the controller, please follow the proper sequence by which it should be connected. Otherwise, static charge could be created in the DC output plug of the AC adapter, potentially resulting in electric shock or weak injury. Also, make sure the adapter's plug does not touch metal parts other than the controller's power connector.



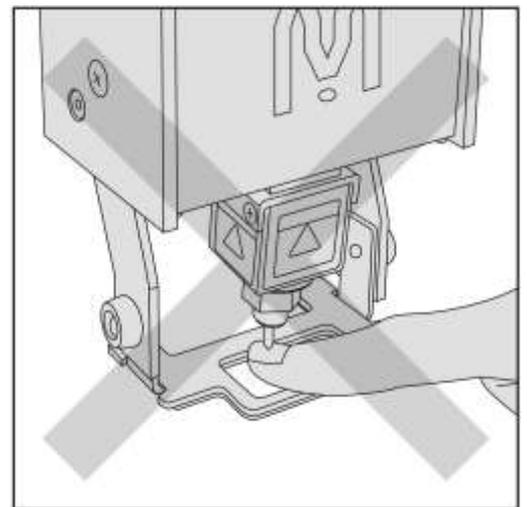
### Beware of high temperature

Prolonged continued use would heat up the solenoid. This will not affect the quality of marking. However, do not touch the area around the stylus pin or the solenoid with bare hands after continued use. In particular, refrain from using the system around small children. **\*Continued use (non-stop for one hour or more) at marking force 10 (maximum power) and Speed 1 (slowest speed) sometimes causes the surface temperature to rise to approx. 120°.**



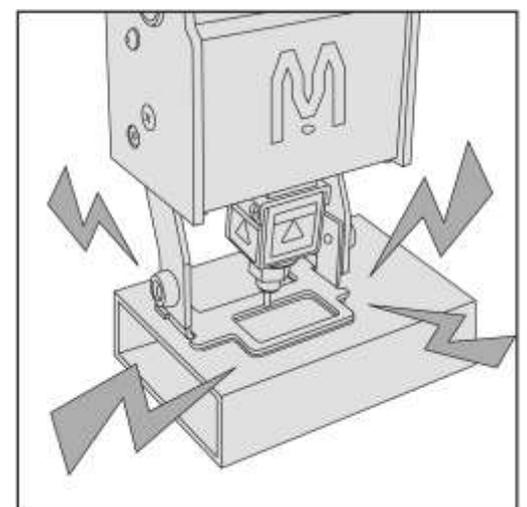
### Take care not to injury finger

The distance between the stylus pin and the workpiece is approximately between **0.1mm and 5mm**. Be careful not to get your finger stuck between the pin and the workpiece. In particular, refrain from using the system around small children.



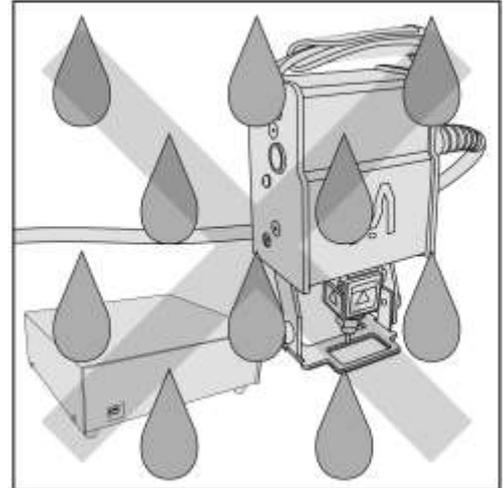
### Beware of loud noise

Loud noise will occur when the Marking Force is set high or depending on material properties and the shape of the workpiece (especially thin and hollow ones such as pipes). Therefore, always wear an ear plug when operating the system.



**Using near water and in a humid area is prohibited**

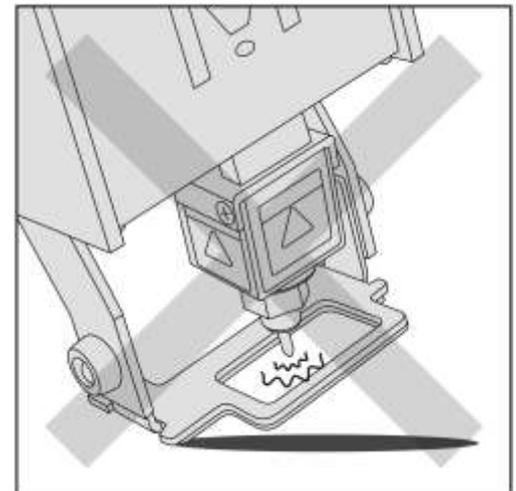
To prevent fire, electric shock, and damage, do not use the system around water. Also, do not touch the system with wet hands.



Contains precautions against actions that could result in injury and damage to the system if they are neglected.

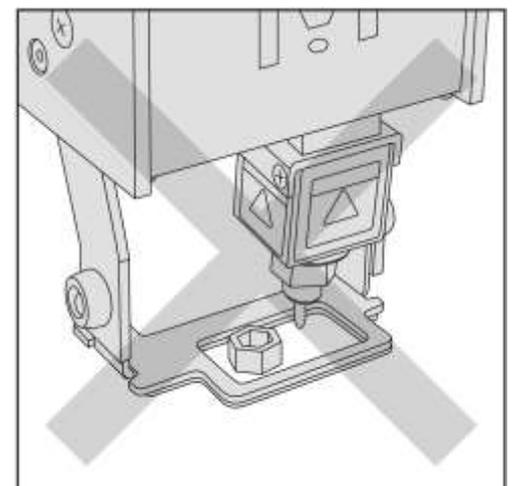
**Check for workpiece before marking**

Do not conduct marking without a workpiece. Always set the workpiece so that the stylus pin touches the workpiece, including during the test run. Negligence could result in damage to the stylus pin.



**Beware of any obstructions**

The marking machine will operate automatically upon applying power. Because the stylus pin will automatically reposition itself to the origin, do not put objects in the marking area that would obstruct the stylus pin from repositioning. Negligence could result in damage to the system.



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## 1. Before marking

**Important :** Please set up the PC display pixels over 1280\*768 dpi. If set up lower than 1280\*768, all features on the software could not use.

**Important :** Need installation both of the USB driver and sketchbook software initially. Once these are installed into PC, you may not need installation again.

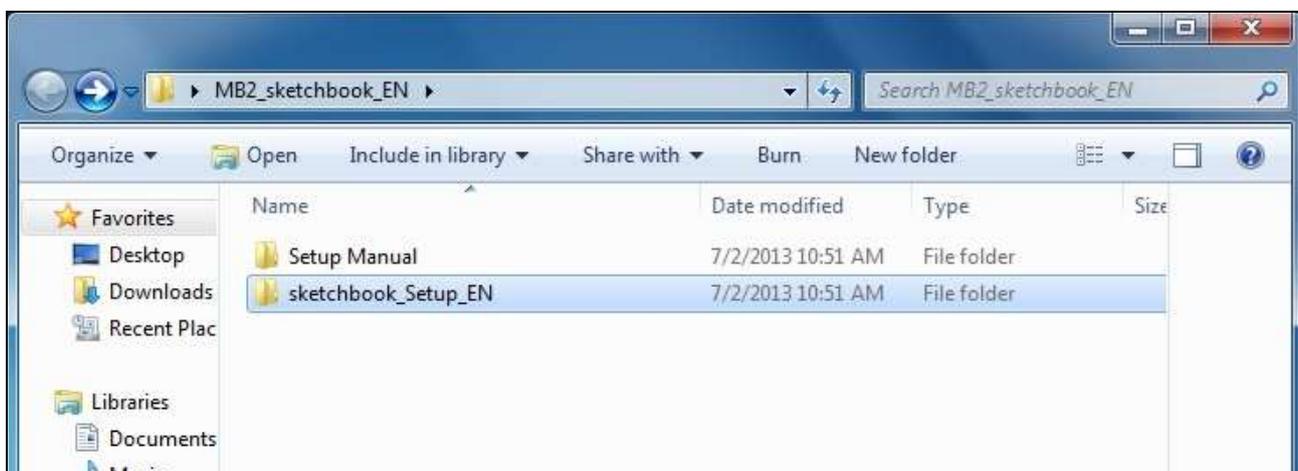
**Note :** The bellow screenshots are based on Windows 7. The screens must be different by using other windows OS.

You have the possibility to operate MB2 controller by following communication method.

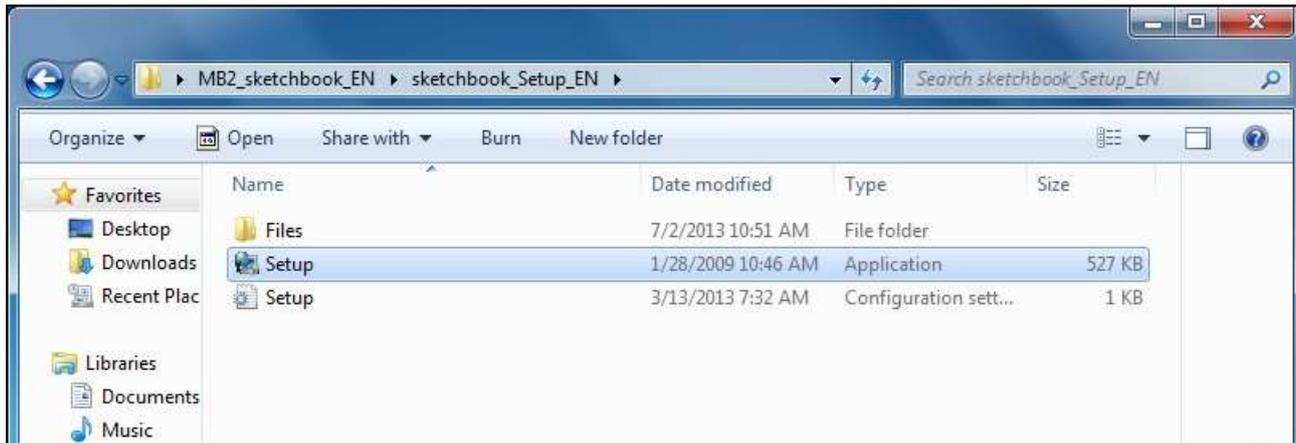
WIFI communication	WIFI wireless communication Enable to wireless communicate with installed the WIFI module in MB2. Please refer to 1-2 section, how to setup WIFI
USB communication	If need an installation the USB driver, please refer to 1-3 section, how to install driver. If USB is unable to communicate, the USB circle button is off light.
RS232 Ccommunication	RS232C communication Communicate by a straight cable (D-SUB 9 pins), please select a Com Port.
LAN communication	Use a cross cable if you direct communicate between MB2 controller and PC. Use a straight cable if you communicate through the HUB network. Please refer to 1-4 section, how to setup LAN communication.

### 1-1. Install the sketchbook Software into PC

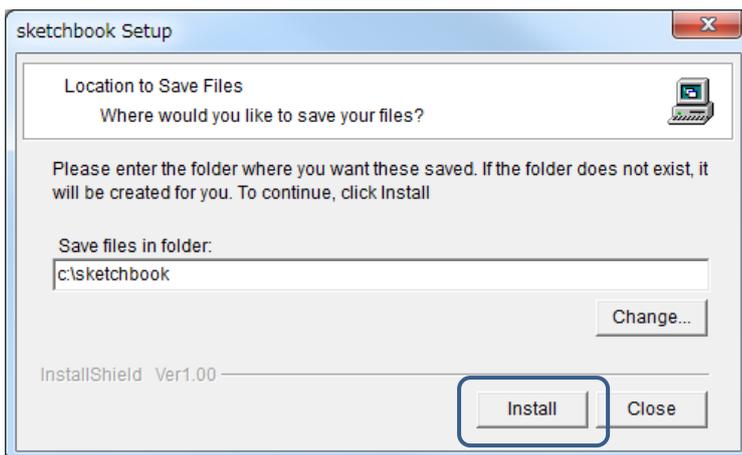
(1) Open the setup application in the holder by going to "sketchbook\_Setup \_EN".



(2) Click "Setup" application for installation.



(3) Click **Install**.



(4) The installation will begin.

(5) After installation, the following window will appear. Click **Close** to end the procedure.



\*if the message may appear after the installation, click "This program was installed correctly.

(5) A shortcut icon will be created on your desktop.

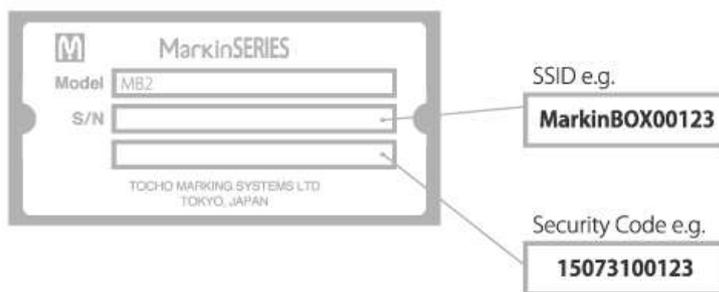
## 1-2. WIFI setup

**Important :** If the LAN wired cable is connected into PC, there is a possibility to have a conflict. Remove the LAN wired cable before start communication with WIFI.

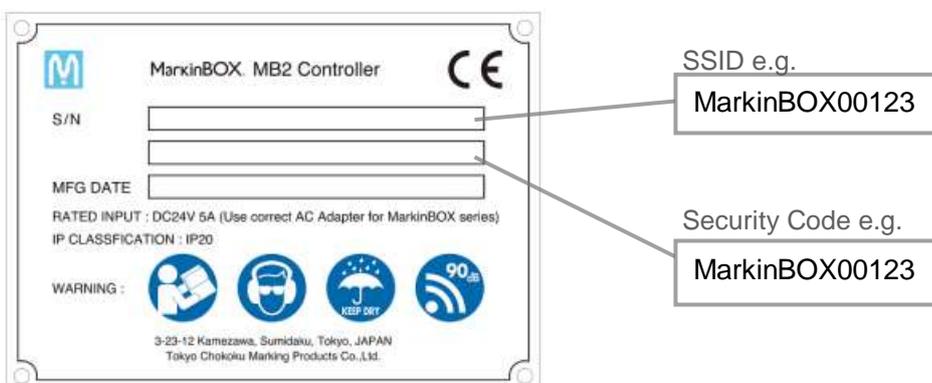
**Important :** WIFI communication is available upper ver.2.4.7\_2 for sketchbook and ROM firmware. Check these version by going into "Menu" → "Help"

- (1) Turn On the power of the MB2 controller first.
- (2) Find SSID "MarkinBOX..." in your WIFI network and Key-in the security code as bellow sample.

### Name plate sample 1



### Name plate sample 2



- (3) Start sketchbook software and select "LAN" communication and "WIFI" button ON. Then click Connect button.



### 1-3. Install USB driver

**Important :** Please set to off internet line during installation of the USB driver to avoid auto update.

(1) Connect a USB cable between MB2 controller and PC, and turn to power ON the MB2 controller. Start plug-and-play automatically and the bellow messages should be appeared.

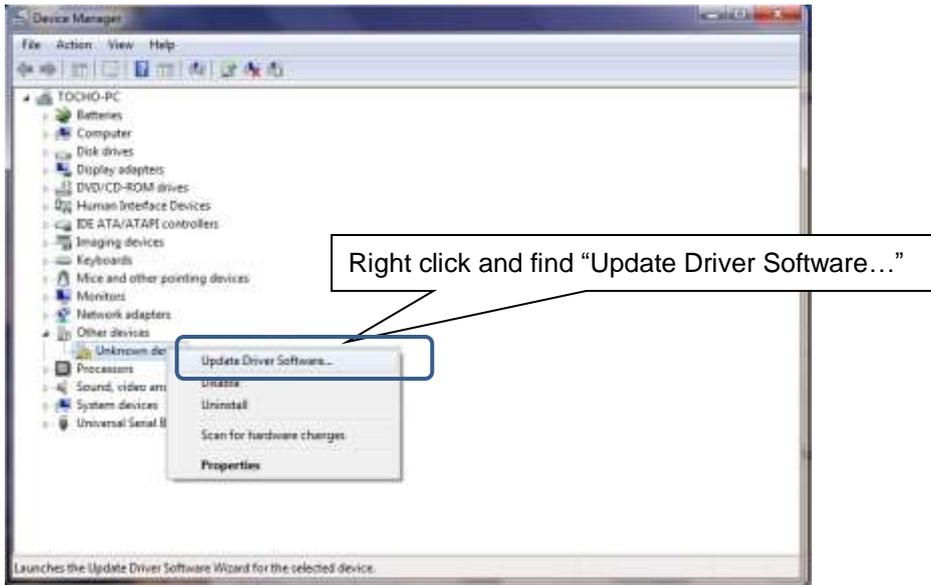
\*if you don't get these messages, skip to section (2).



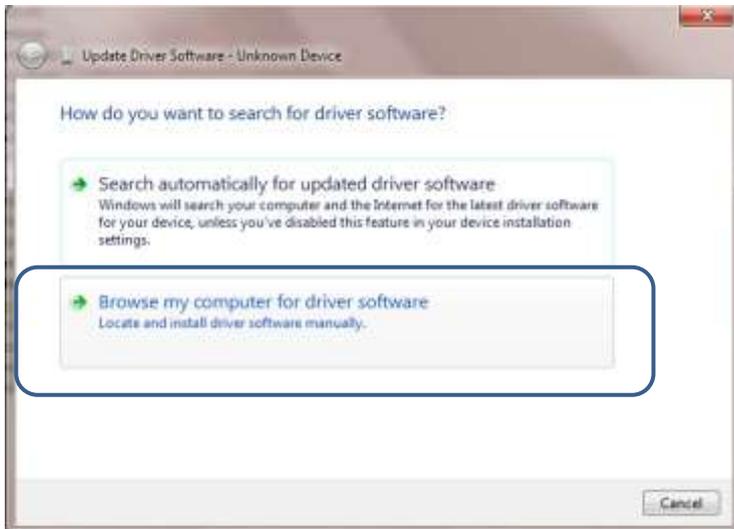
(2) Open "Device Manager" (from "Control Panel" → "System and Security" → "System").



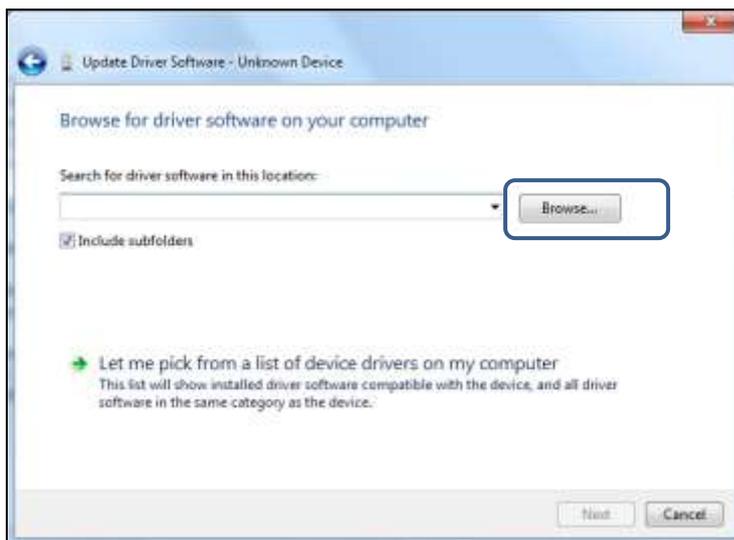
(3) Find "Unknown device" and right click, find "Update Driver Software..."

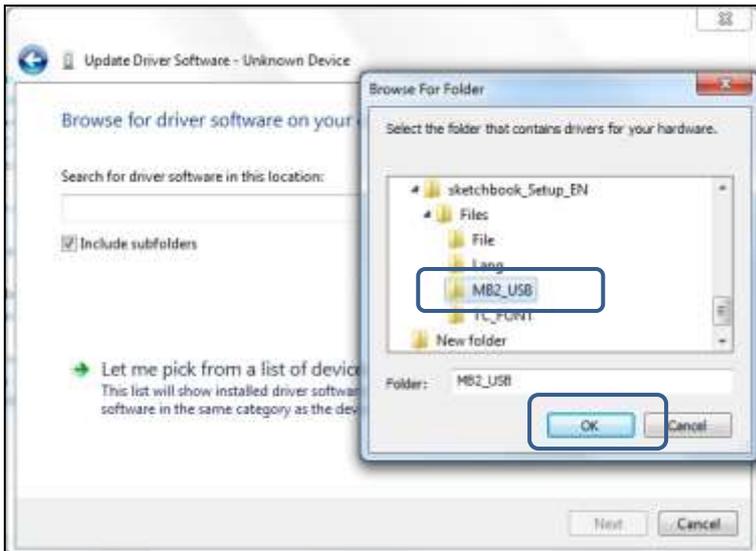


(4) Select "Browse my computer for driver software"



(5) By clicking **Browse...** button, select "MB2\_USB" folder under "sketchbook\_Setup\_EN" → "Files" in the holder.





(6) Click **Next** button.

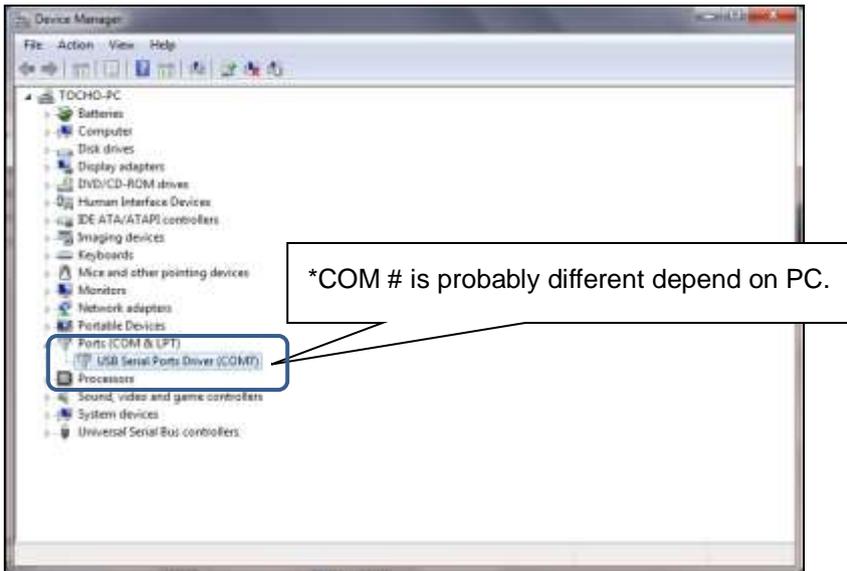


(7) If the warning message appears, select "Install this driver software anyway".



(8) Start installing. When the installation is complete, click **Close** button.

(9) Check the device manager again whether the installation is successful.



### 1-4. LAN setup

Default IP setting of MB2 is as follows.

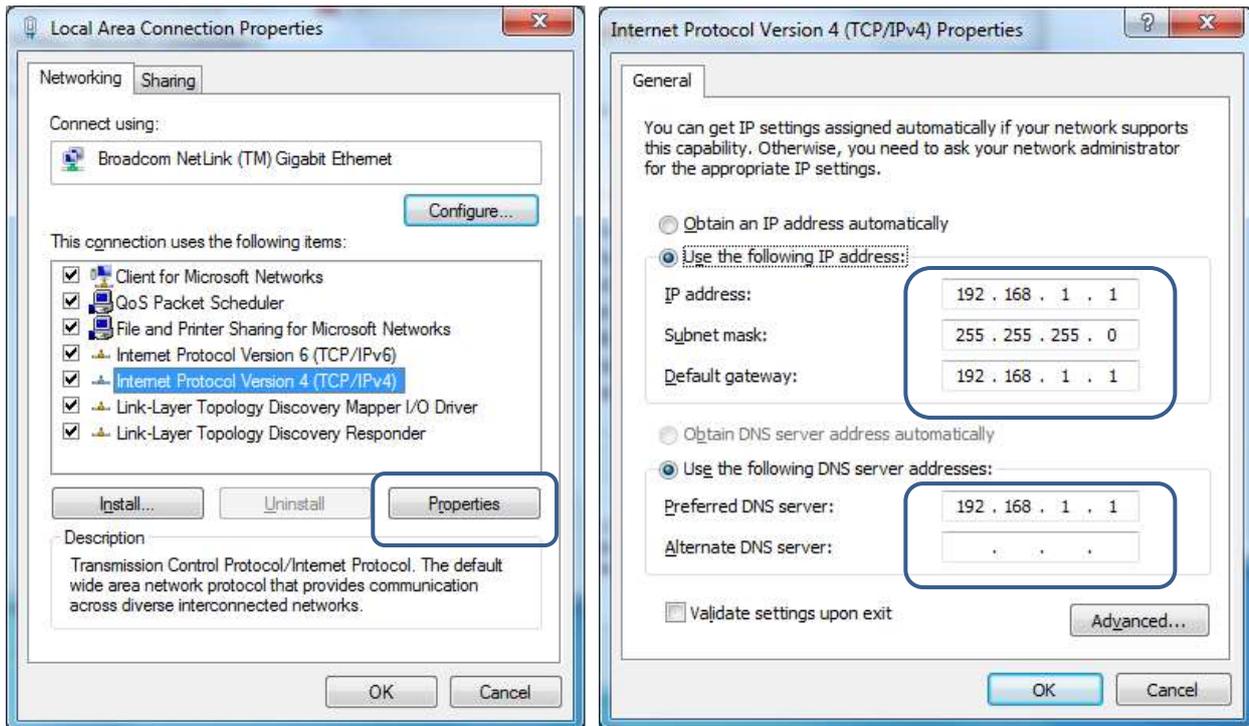
ID	Default
IP Address	192.168.1.120
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
Port No.	55000

(1) Peer to Peer connection

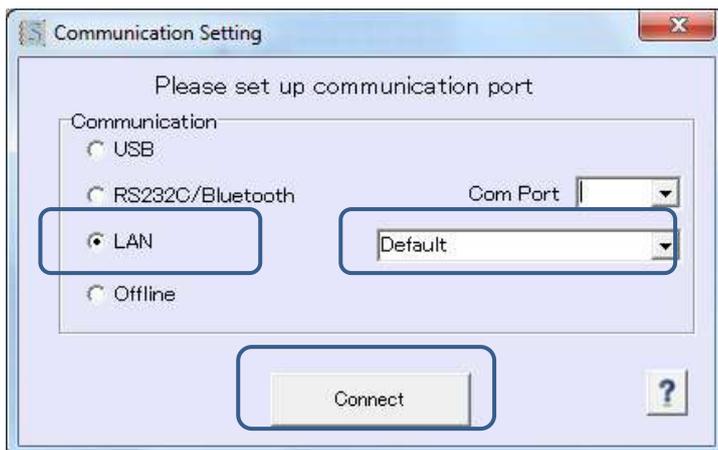
\*Need a cross cable depend on the PC

Please change as follows the TCP/IPv4 in the Local Area Connection of the PC. If you want to connect back to other networks, you may need to revert to original settings. Check with your network administrator for more information.





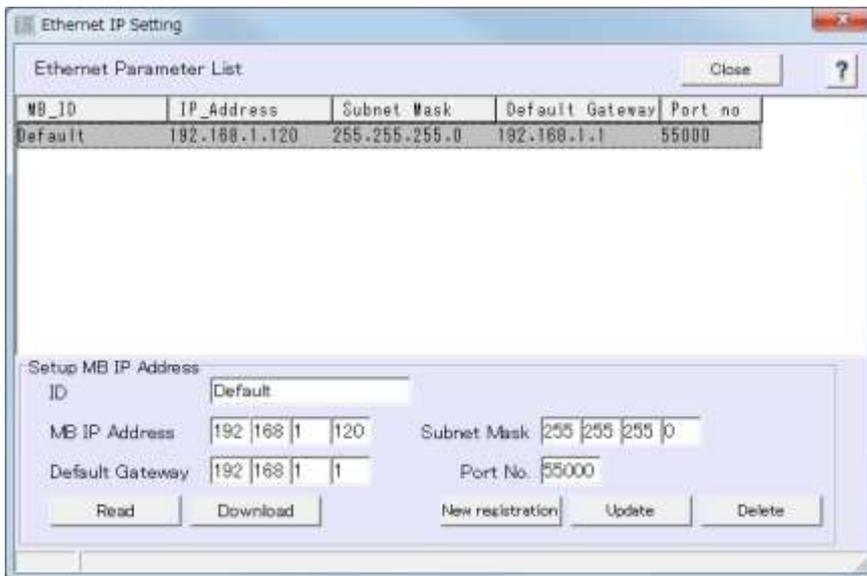
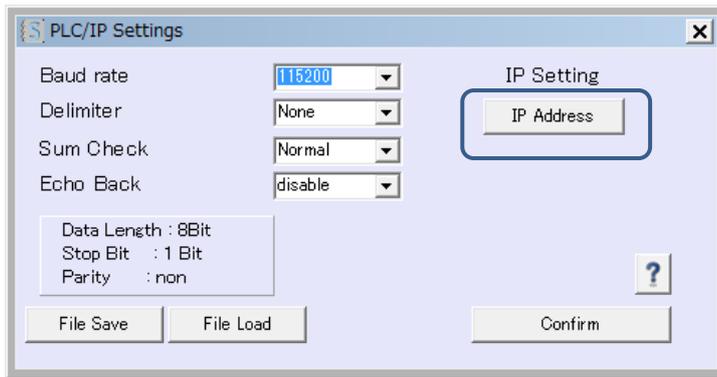
Connect the RJ45 Ethernet (LAN) cable between PC and MB2 after setup the TCP/IPv4. And go to "Menu" → "Settings" → "Communication" and choose "Default" by pull-down menu. Click "LAN" circle button and click **Connect** button to connect.



## (2) Network connection

Enable to setup any IP address to MB2 controller and connect to the other networks.

Go to "Menu" → "Advanced Settings" → "PLC / IP settings" → "IP Address"



Check with your network administrator in regards with the IP Address. For more information on how to set up, refer to the “4-4 Ethernet IP Settings” in the operation manual.

## 2. Start up sketchbook

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### 2-1. Turn on the power for the marking machine and the controller

- (1) Verify that the controller’s power is off. Then, connect the main cable with the controller.  
Make sure to fix with two screws to the connector at the controller.
- (2) Verify that the USB cable is connected between the PC and the controller.
- (3) Verify that there is no obstructing object between the marking machine and the stylus pin.  
Then, turn on the power for the controller and LED is on light.

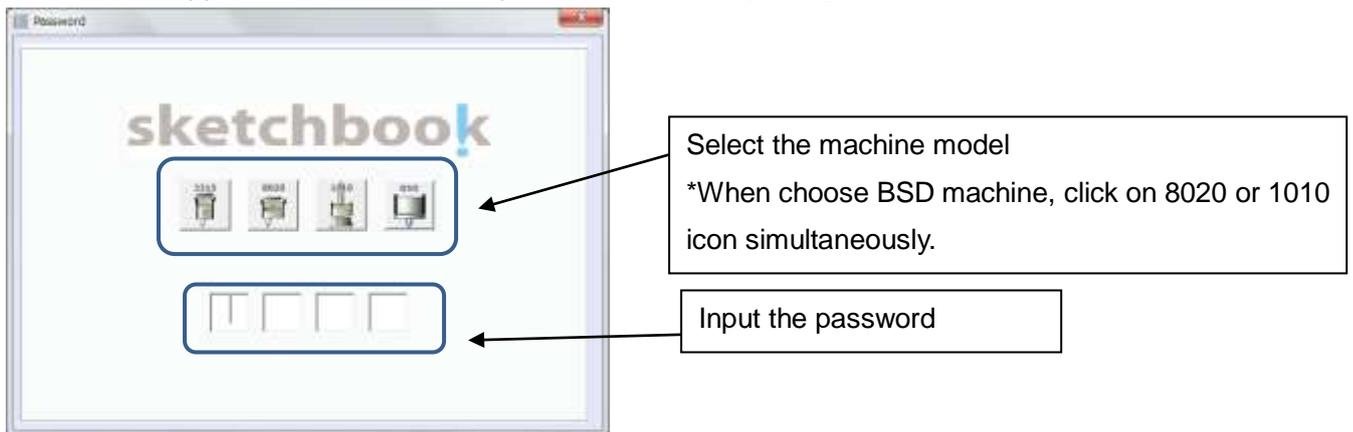
## 2-2. Start sketchbook software

### When you do not know the operation...

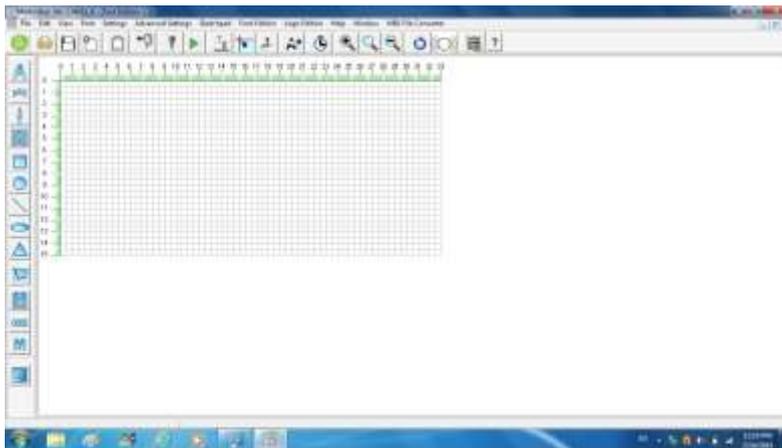
 icon is located in the each screen. PDF Operation is displayed by clicking the icon. In addition, the Operation Manual appears whenever go to Menu → Help → Manual.

(1) Double click the shortcut icon on the desktop. Select the icon for the device you are using, and input the password [0000].

\*When shipped the Administrator password is set to [0000].



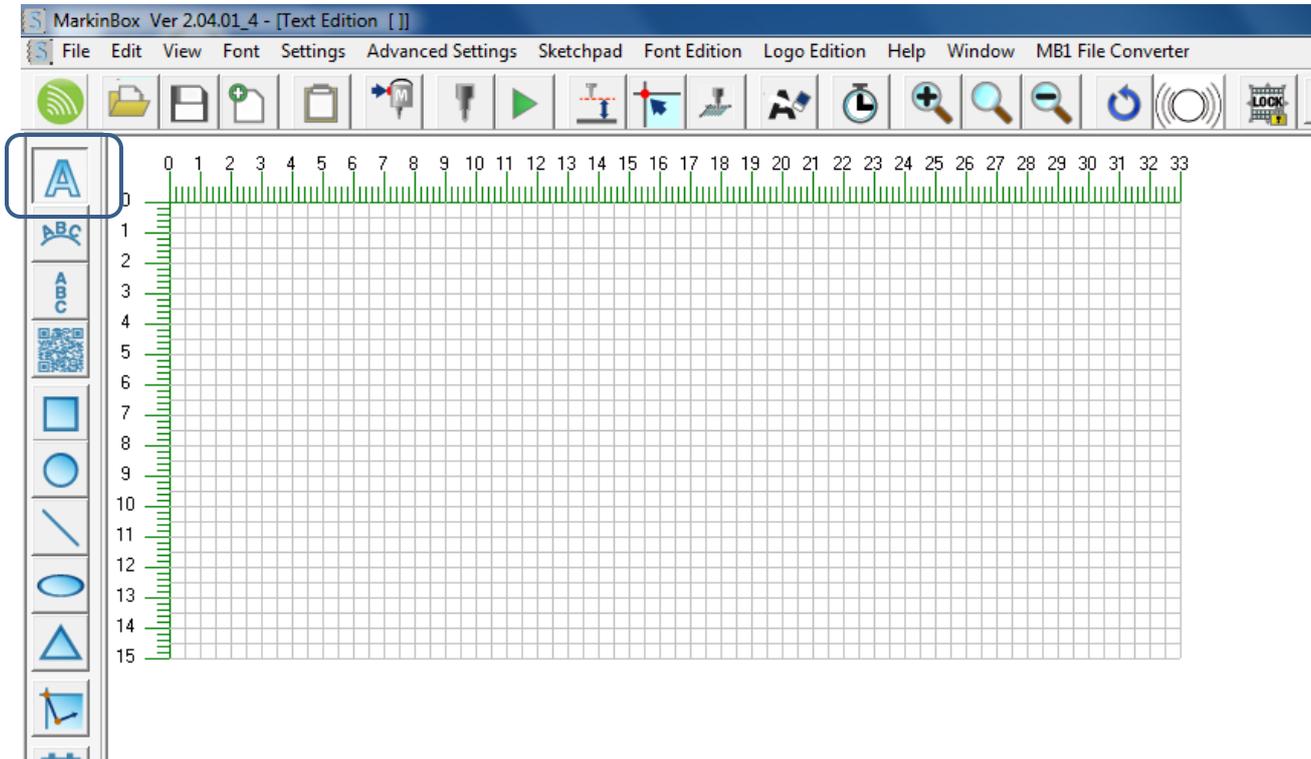
(2) The following screen will display.



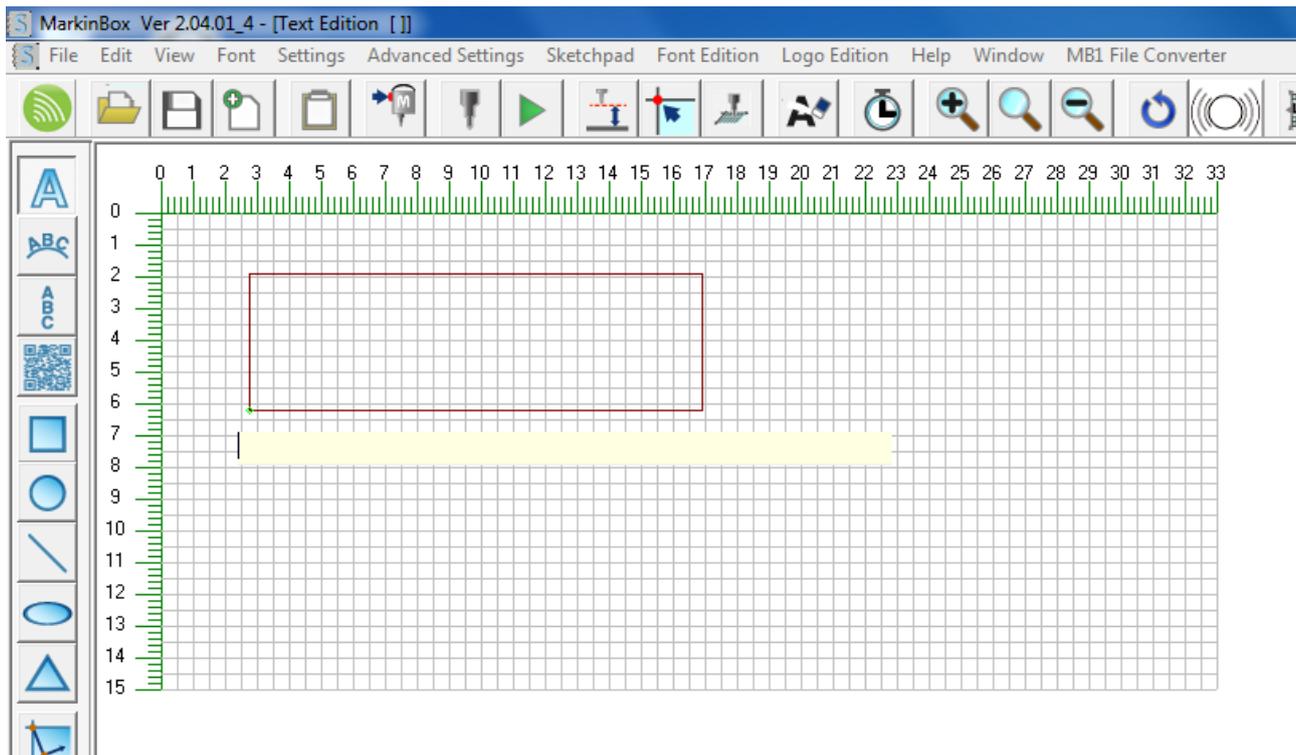
## 2-3. Start marking

(1) From Main screen

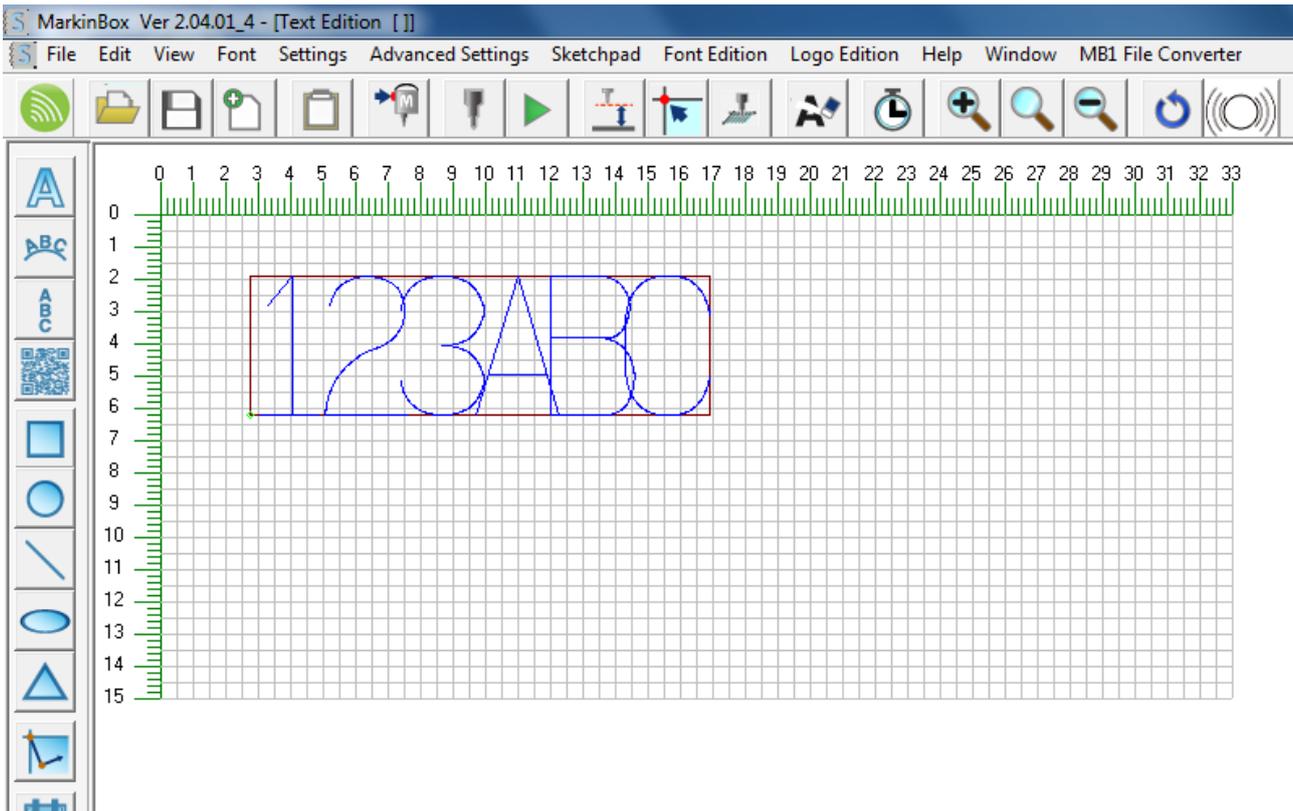
Click the text icon  in the editing icon panel. (See section 2-4 for explanations of the icons)



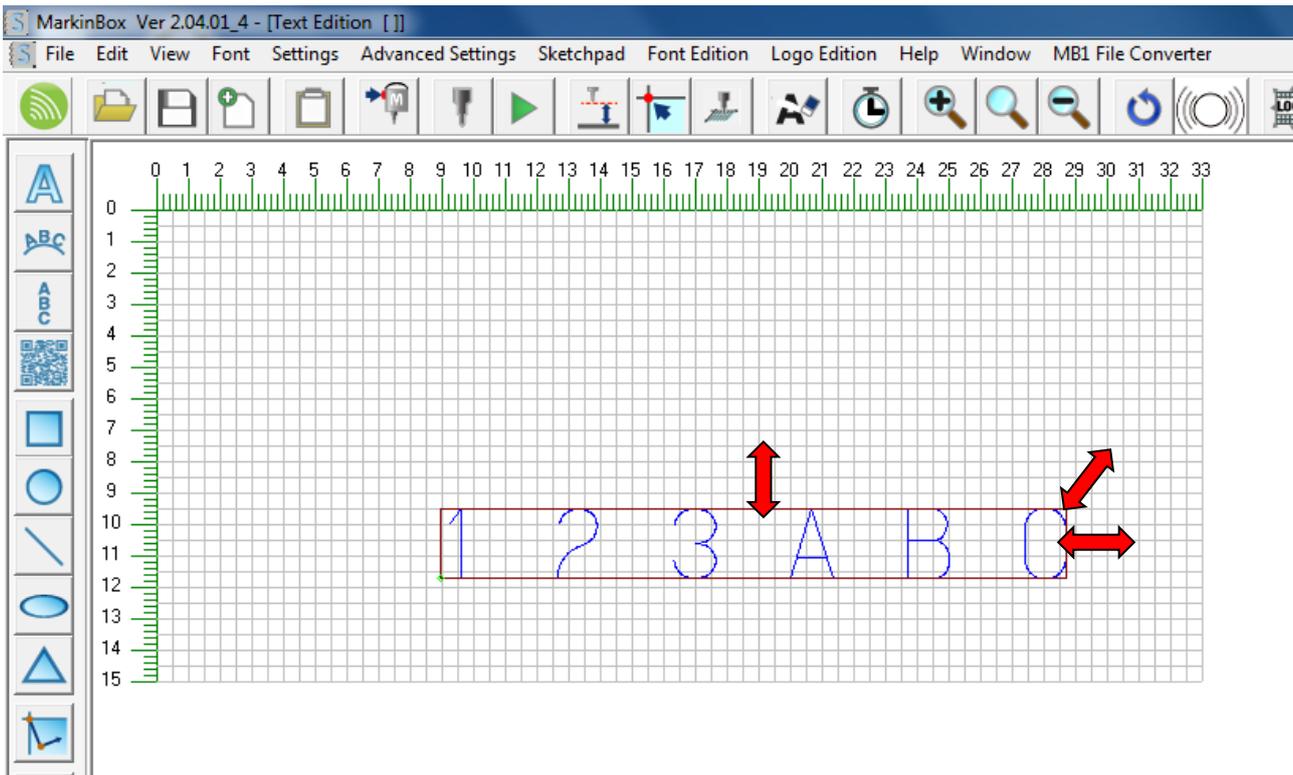
(2) Create a rectangle (called the Field) in the preview screen by dragging the mouse.



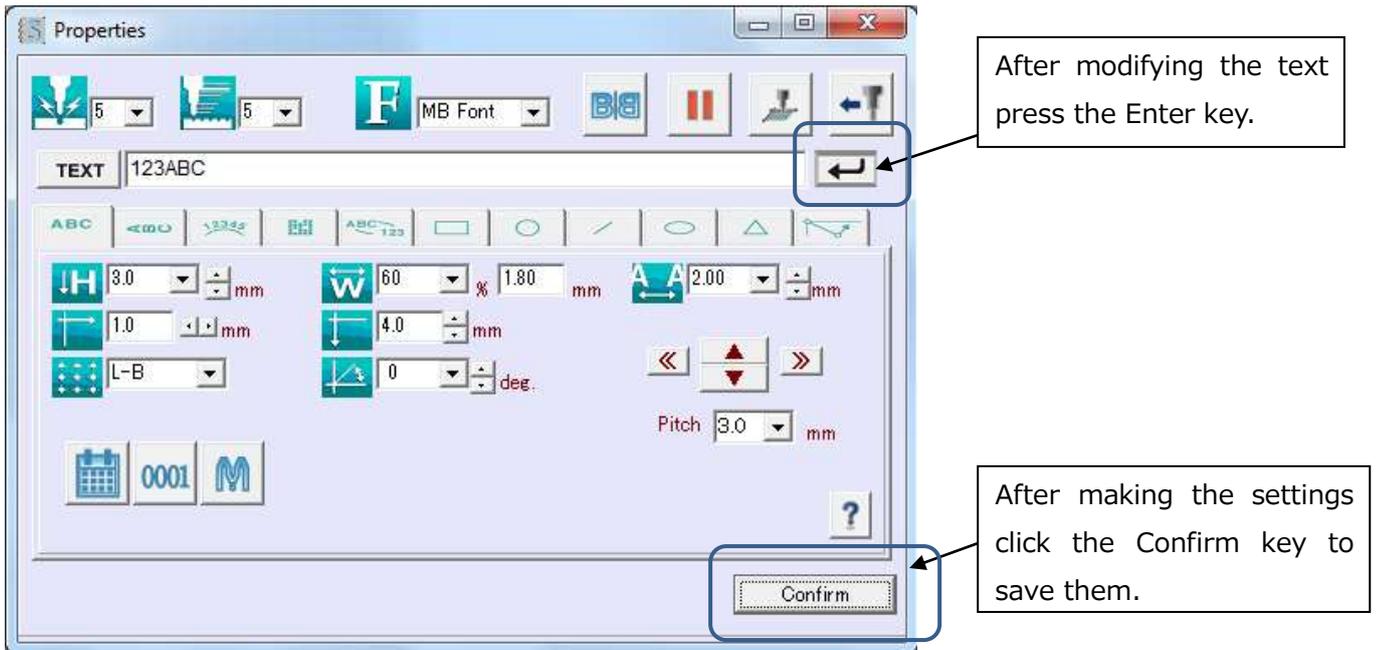
(3) Enter text in the white box where the cursor is flashing and press “ENTER” key.



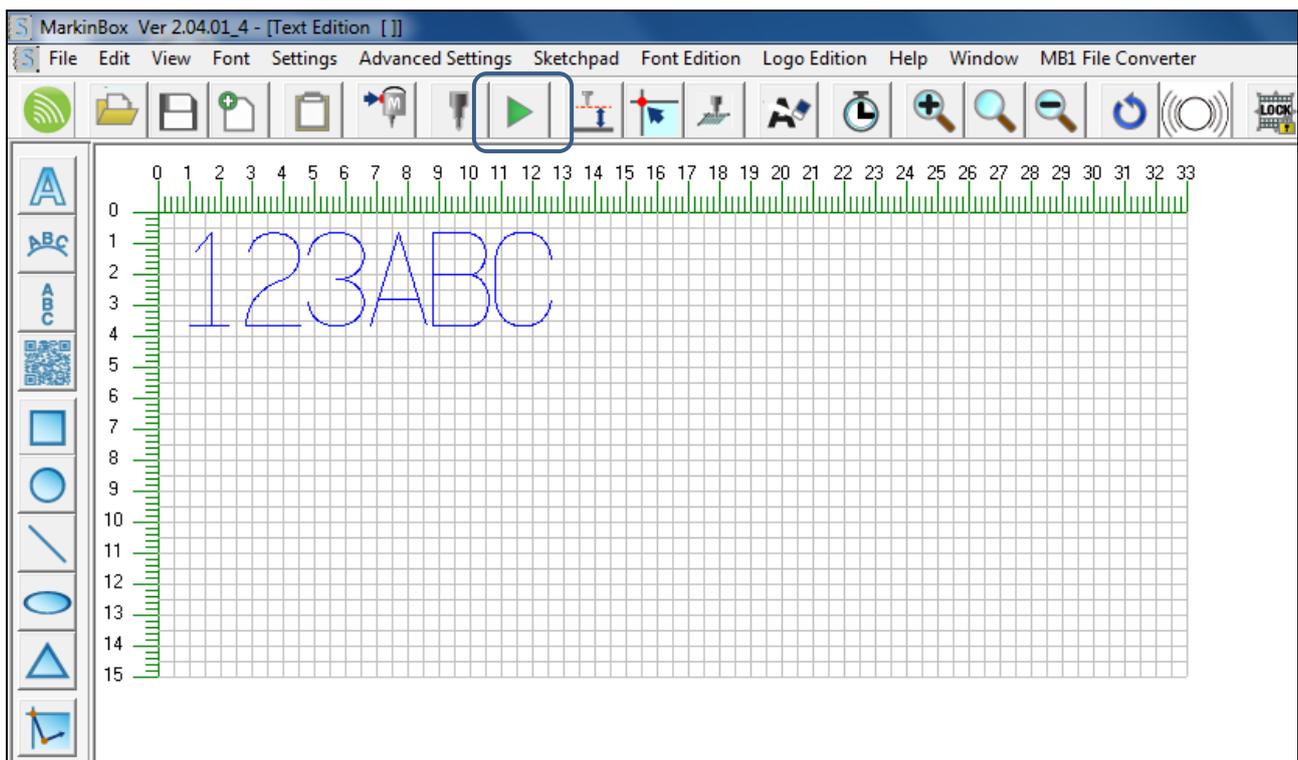
(4) You can change the height and pitch of the text by dragging the top - bottom and right - left sides of the field. You can also move the field by dragging it with the mouse. When the field is selected, you can also move the field by using arrows key in PC keyboard.



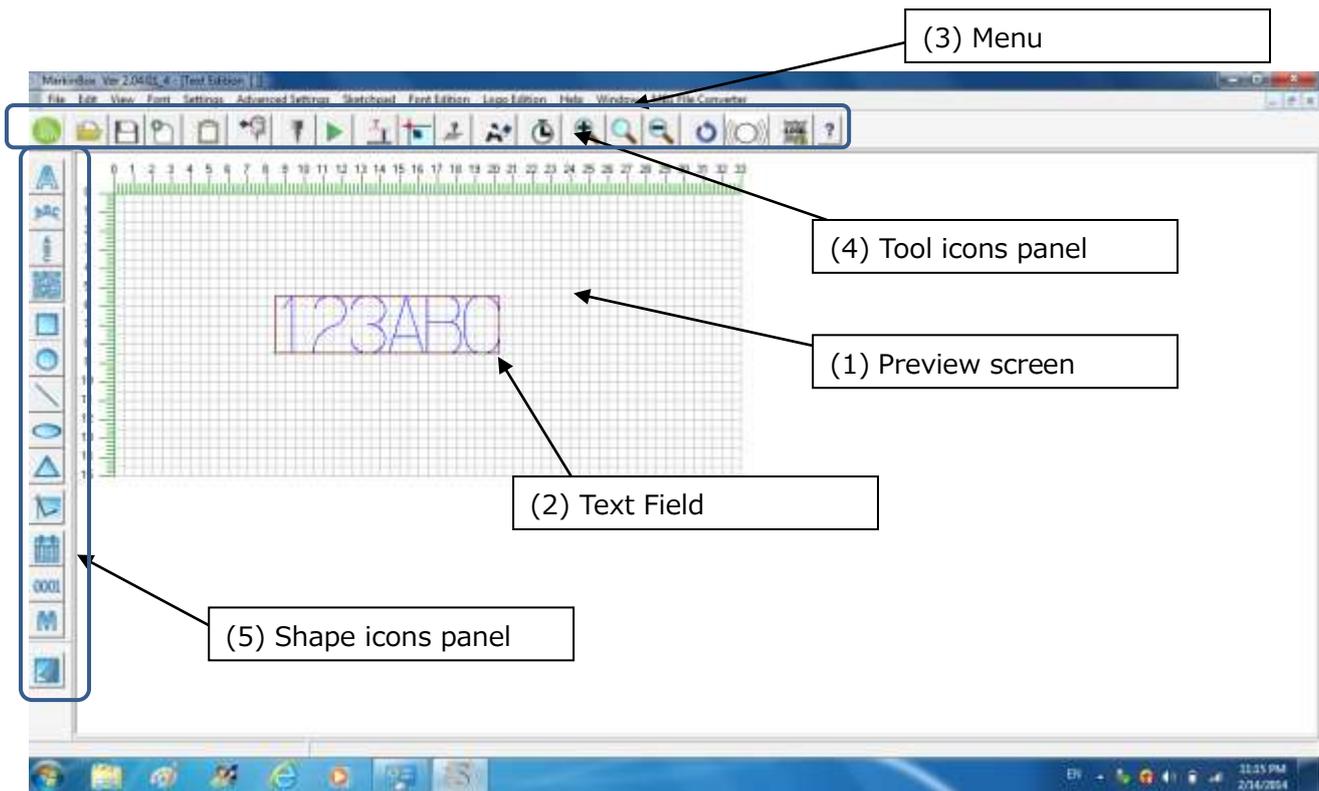
(5) Double clicking on the field brings up the property dialog shown below. You can use this to make various settings. (See section 2-5 for explanations of the settings.)



(6) Set the object to be marked in position. Clicking the start icon  in the operation icons panel will start the marking.



## 2-4. Explanation of the main screen



(1) Preview screen	This screen is for editing text on the text layer and drawing objects on the template layer.
(2) Text field	This is where you input the text to be marked.
(3) Menu	Used for file management and making various settings.
(4) Tool icons panel	These icons are used for various operations such as starting and stopping marking, and zooming in and out of the screen. Placing the cursor on an icon will display a short explanation regarding its use.
(5) Shape icons panel	Used for editing tasks such as creating text and objects, or changing screens. Placing the cursor on an icon will display a short explanation regarding its use.

Tool icons	
	Online and Offline Show communication status, online (green) or offline (white).
	File open Opening saved files in the PC. The file format is .prg.
	Save Overwriting the data.



	<p>New Create a new data file.</p>
	<p>Properties list Display the field list</p>
	<p>MB mode Switch marking to MB mode (Start marking using the start button on the marking head).  Due to send the text data, press  icon.</p>
	<p>Test Simulating the marking. When clicked, the icon inverts and the test mode launches. The stylus pin will operate without marking, upon pressing the start button.</p>
	<p>Start/Send Clicking this button will start marking. Simulated marking will begin if the TEST button is operating (inverted). [When MB is selected]: Clicking this will change the button to "SEND," and send data.</p>
	<p>Distance Use of this function will enable the user to set the distance from pin tip to workpiece. The stylus pin will move to a center position. From this position, set the distance between the stylus pin and the workpiece.</p>
	<p>Origin Returns the stylus pin to the home position.</p>
	<p>Jog operation Directly repositioning the stylus pin is also possible. The stylus pin will move by inverting the button and clicking on the button and navigating with the arrow keys (top, bottom, left, right) on the left.</p>
	<p>All clear Clears the text data in the preview window.</p>
	<p>Time Clicking the button will show the marking time after finished marking. PC mode is used only.</p>
	<p>Zoom in Zooms into the preview screen.</p>
	<p>Zoom reset Displays the preview screen at 100% size</p>
	<p>Zoom out Zooms out from the preview screen.</p>
	<p>Reset Clicking this button when the alarm button (red) lights up will cancel the operation.</p>



	<p>Alarm</p> <p>Flashes in red when an alarm occurs.</p>
	<p>Field Lock</p> <p>Lock a swipe motion of the all field on the preview.</p>
	<p>Operation guide</p> <p>Display the operation guide.</p>

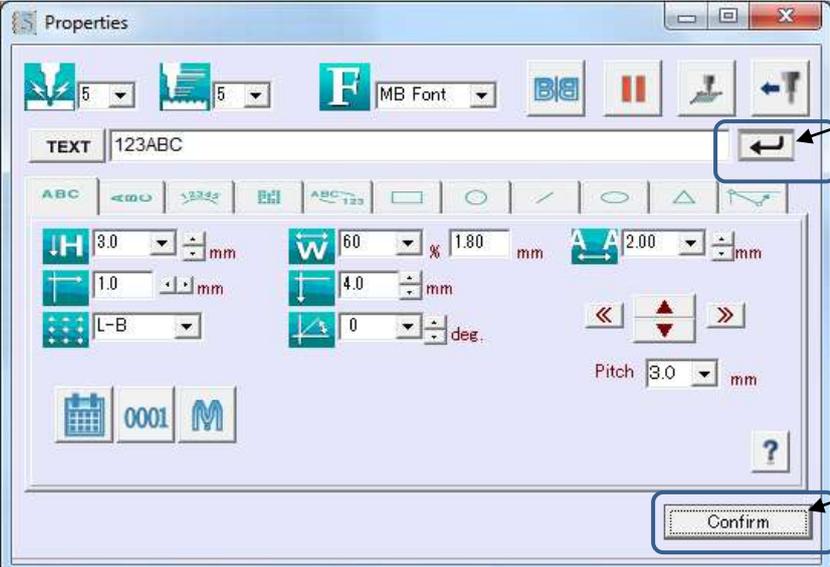
Shape icons	
	<p>Text</p> <p>Creates the field of horizontal text.</p>
	<p>Arc text</p> <p>Creates the field of arc text.</p>
	<p>Vertical text</p> <p>Creates the field of vertical text.</p>
	<p>2D barcode</p> <p>Creates the field of data matrix, or QR code 2D code.</p>
	<p>Calendar</p> <p>Used for setting only calendar and shift making.</p> <p>Please click the   and  in advance.</p>
	<p>Serial</p> <p>Used for setting only serial marking (consecutive number marking).</p> <p>Please click the   and  in advance.</p>
	<p>Logo</p> <p>Used for setting only logo marking.</p> <p>Please click the  and  in advance.</p>
	<p>Rectangle</p> <p>Creates a rectangular object.</p>
	<p>Circle</p> <p>Creates a circle.</p>
	<p>Line</p> <p>Creates a straight line (Moving the center point makes a curve).</p>
	<p>Oval</p> <p>Creates an oval</p>



	Triangle Creates a triangle
	Bypass coordinate Performs a pin bypass. Clicking on a point in the preview screen will move the pin to that location during marking. This can be used to avoid an impediment or to marking one dot.
	Bitmap marking Creates the field of bitmap marking. Go to Advanced Settings → BMP converter to setup bitmap data in advance.
	DXF marking Creates the field of DXF marking. Go to Advanced Settings → DXF converter to setup DXF data in advance.
	Show up template layer Displays / hides the template layer.

## 2-5. Explanation of the property screen

Double clicking or right clicking on the field will display the following screen. Detailed setting for all fields can be made (The settings that can be made will vary according to the contents of the field. The following screen shows the settings for a text field.)



Click the ENTER key after modifying text

Click the Confirm button to confirm data

	Marking force Setting the marking force on the scale of 0 (none) to 10 (strong).
	Marking speed Setting the marking speed on the scale of 1 (slow) to 10 (fast). When the marking speed is slow, the dot density becomes higher and the marked characters will appear more continuous. On the other hand, when the marking speed is fast, the dot density becomes lower, and the marked characters will appear "dotted."



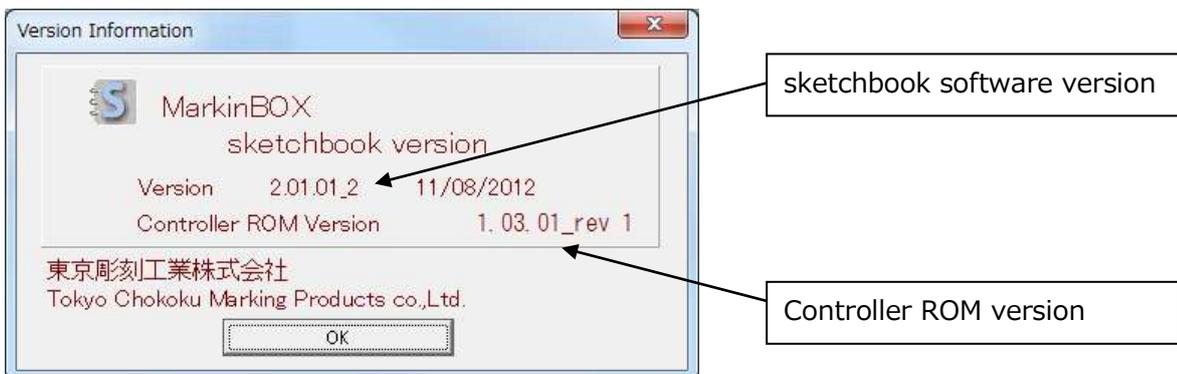
	<p>Fonts</p> <p>Clicking on the button will change the MB font, PC font and 5x7 Font. Please setup the details on the [Font] in the toolbar.</p>
	<p>Mirror</p> <p>Clicking this button will be reversed the text.</p>
	<p>Pause function</p> <p>Clicking this button will pause at the XY coordinate of the next filed. During waiting for at the next XY coordinate, push the start button or click restart button for restarting. Please click the icon ON in the each filed which you would like to pause.</p>
	<p>Jog operation</p> <p>Directly repositioning the stylus pin is also possible. The stylus pin will move by inverting the button and clicking on the button and navigating with the arrow keys (top, bottom, left, right) on the left.</p>
	<p>Marking Direction</p> <p>Clicking this button will change marking direction.</p>
<p><b>TEXT</b></p>	<p>Making ON / OFF</p> <p>Use this to choose if the field is to be used for marking, or not.</p>
	<p>ENTER key</p> <p>Confirms the input after modifying text.</p>
	<p>Character height</p> <p>Setting the character height from 0.1mm, in pitch increments of 0.1mm.</p>
	<p>Character width</p> <p>Setting the character width on a scale of 10% to 200%. The percentage against the character height is set with a percentage. For example, 60% at a 3mm character height would result in a character width of 1.8mm.</p>
	<p>Character pitch</p> <p>Setting the character pitch from 0.1mm, in pitch increments of 0.1mm.</p>
 	<p>X axis and Y axis coordinate</p> <p>Setting the X and Y axes of the start marking position. This can also be repositioned by clicking the navigation buttons. </p>
	<p>Angle</p> <p>The marking angle can be set from 0 to 360 degrees. The default angle is 0 degrees.</p>
	<p>Base point</p> <p>Used to set the origin point for the XY axes.</p>
	<p>Radius</p> <p>Sets the radius for arc text.</p>
	<p>Diameter</p> <p>Sets the diameter for arc text.</p>



	<p>Center point Sets the center coordinate.</p>
	<p>Move arc text Used to move the text at angle based on the center point</p>
	<p>Type of 2D code From the pull-down list, choose from two options: QR Code and Data Matrix. *QR Code using Alphabet and numbers: 44 characters (i.e., 0-9,A-Z,\$,%*,+,-,/, , :)</p>
	<p>Field connection Text data in the field is the ability to link 2D bar code contents. Please check the box [field connection] if would like to link the text and select the field from the pull down list</p> 
	<p>Bypass pausing time Sets the pausing time when you choose bypass coordinate.</p>
	<p>Calendar Used to for setting calendar and shift marking. Displayed as @C[ ].</p>
	<p>Serial Used for setting serial number marking. Displayed as @S[ ].</p>
	<p>Logotype Used for setting logotype marking. Displayed as @L[ ].</p>

### 3. How to Check the Software Version

To check the version of the software and the controller ROM, choose [Version] from [Help] in the toolbar.





#### **4. Uninstalling the Software**

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Follow the steps outlined below to uninstall sketchbook from your computer.

- (1) Exit sketchbook.
- (2) Select the "sketchbook" folder from "Computer" → "C Drive", right click and choose "Delete".
- (3) Uninstall is completed.

#### **5. Inquire about items inquiry**

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Please contact our distributor if you have inquiry for operation and malfunction.

Manufacturer information:

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