

CLM-20 CardMark Manual

Version 1.2



Nidec Copal Corporation

History of Changes

Version	Date	Description
1.0	16-May-2013	Released initial version with contents separated from the maintenance manual.
1.1	16-May-2015	Reviewed
1.2	15-Jun-2016	Added Sequential numbering Changed the face image

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1. Installation and Uninstallation

CardMark is the sample application developed based on the SDK of CLM-20. This application is developed to evaluate each function and performance of CLM-20 such as card transports, test marking and single unit movement. The applicable OS is Windows 7.

Attention: This application is subject to change without any notice due to improvements or any other reasons.

The functions or performance may not be satisfied due to PC conditions, software environment or any other reasons.

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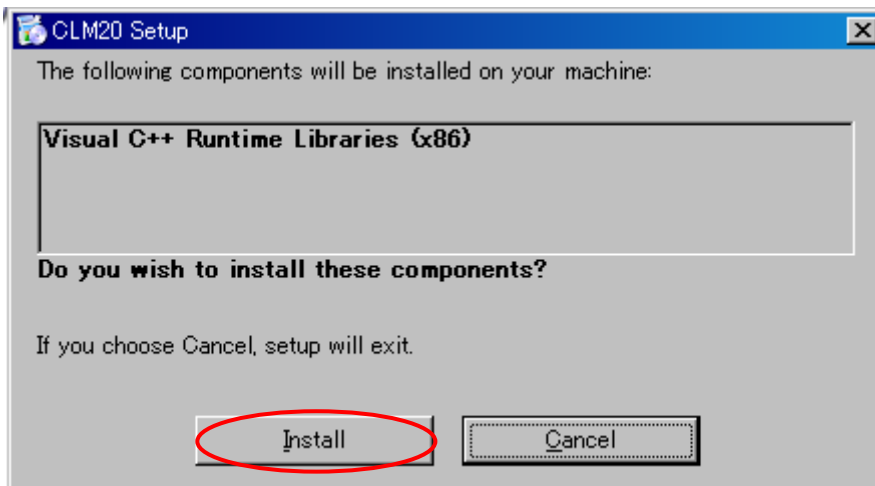
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1.1. Installation

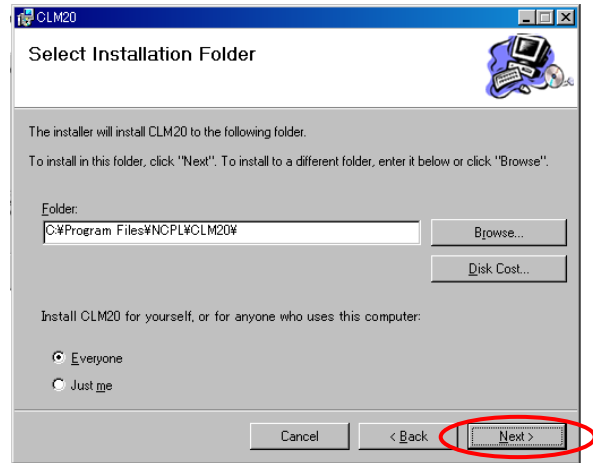
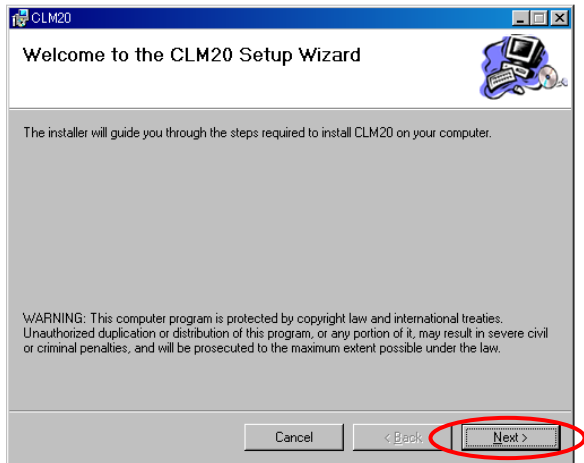
Installation is required to use the CardMark. You also need to install the laser marker SDK and the card control SDK separately. For the procedure to install those SDK, refer to those specifications.

Run "setup.exe" in "App\CardMark\Release_???" of the disk, then the following screen will appear. Click "Install".

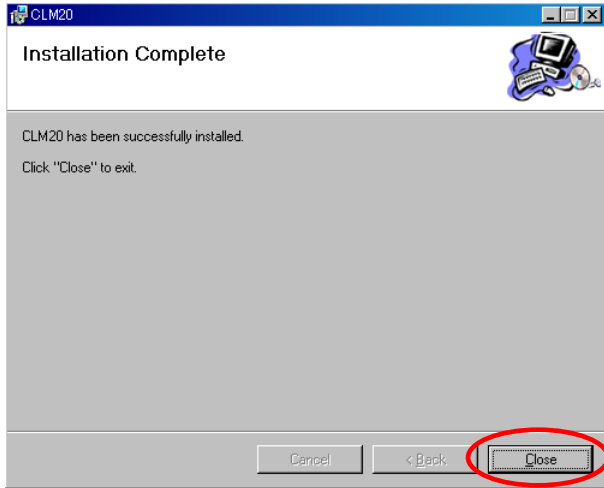
Note: ??? of the filename represents version of the setup.



Click "Next" according to the descriptions on the screen.



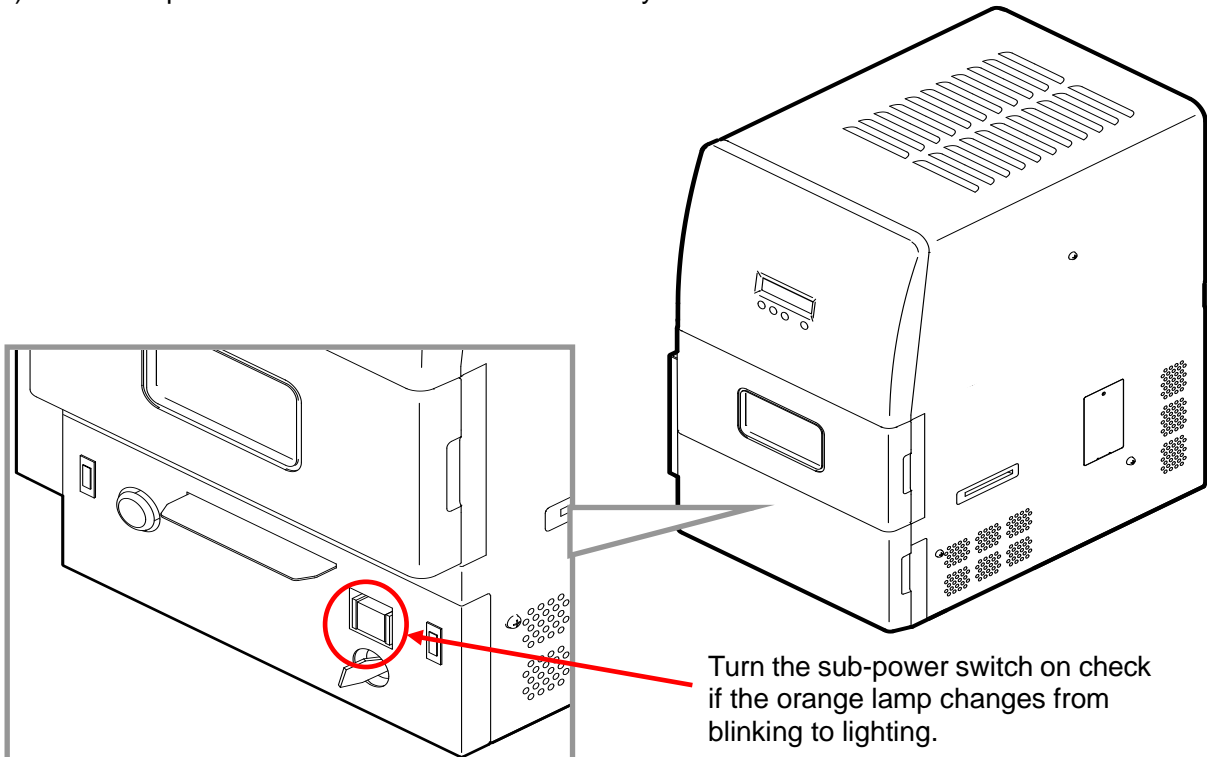
When the following screen appears, the installation has been successfully completed.




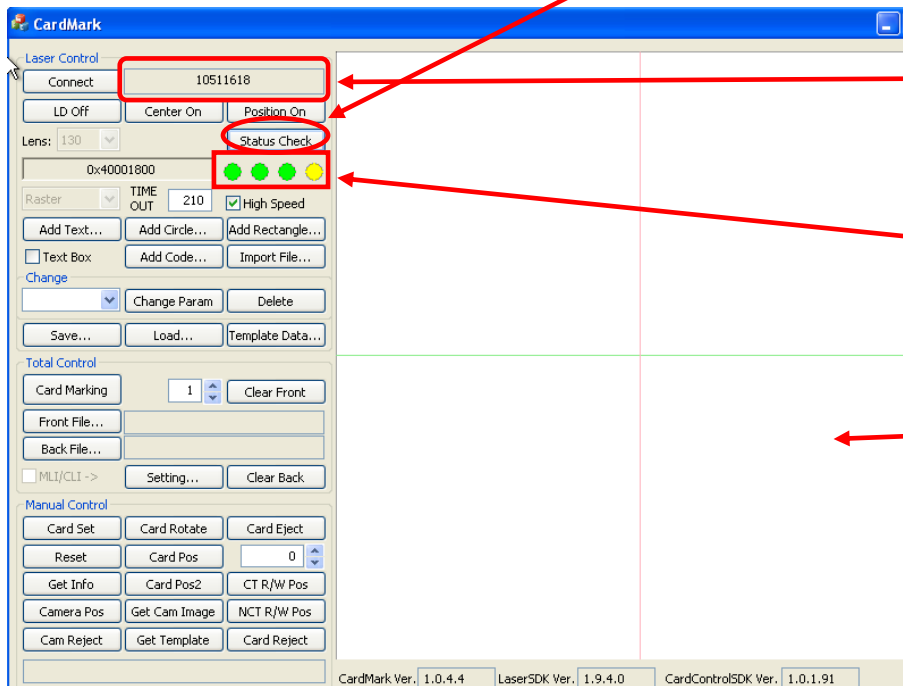
1.2. Verifying Installation

Check if the drivers and CardMark software are correctly installed.

- 1) Turn the power of CLM-20 on and connect it to your PC.



- 2) Click CardMark icon  on the desktop. Press "Status Check"



Check if the serial number of laser equipment is indicated here.

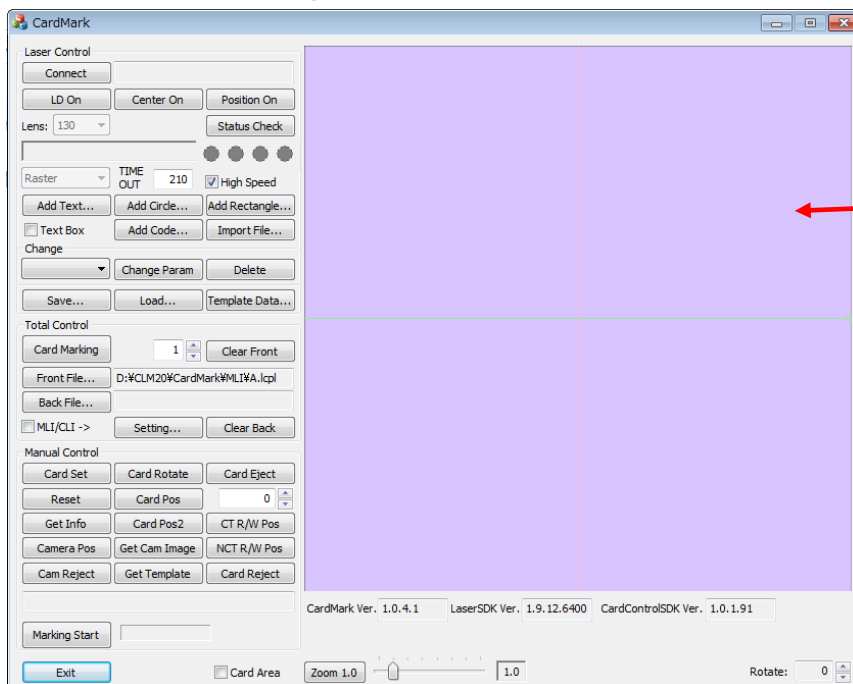
Check if green, green, green and yellow colors light from left to right.

Check if the background is white.

- 3) The installation of laser control drivers and the CardMark has been successful, if the screen of your PC is displayed like the above,

If something is wrong, try restarting the CLM-20 several times.

If your PC does not recognize the CLM-20, the screen may be like the following.

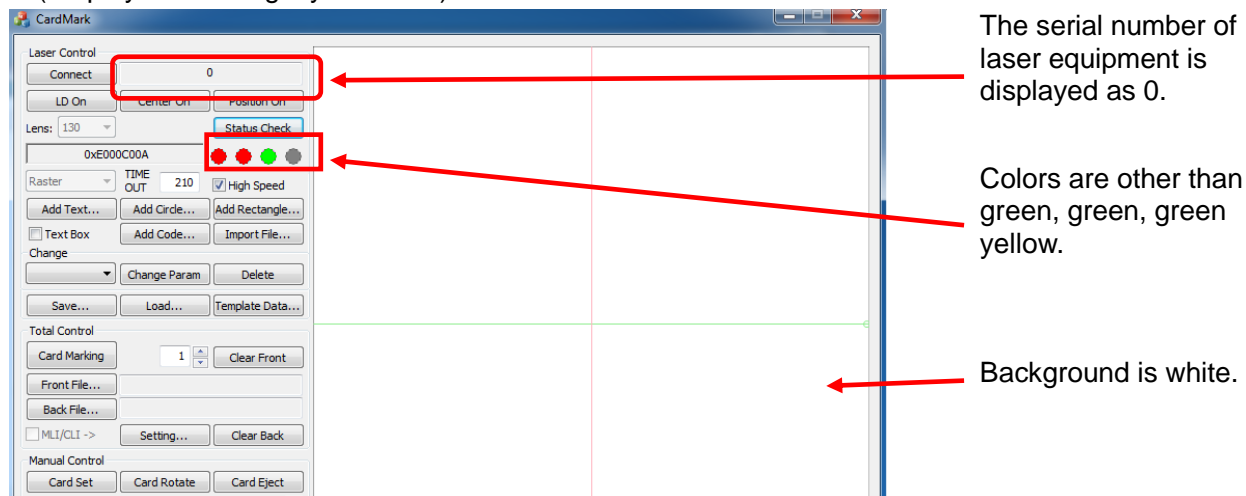


Background is not white.

The cause can be wrong connection between your PC and the CLM-20 or failure in the driver installation. Check the connection again and try installation of driver again. Also refer to the chapter 4 "Installation Failure on both 32-bit and 64-bit OS" of the CLM-20

software installation manual

Check Serial number and Laser status.
(Display can be slightly different.)



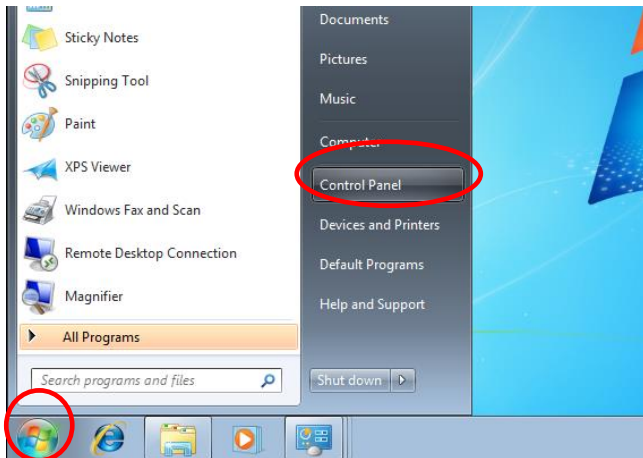
If the problem is not solved though you restart the “Card Mark” and restart the CLM-20, you should check if wrong version of “CardMark” has been installed. Uninstall the “CardMark” and then install the correct version of “CardMark”.

1.3. Uninstallation

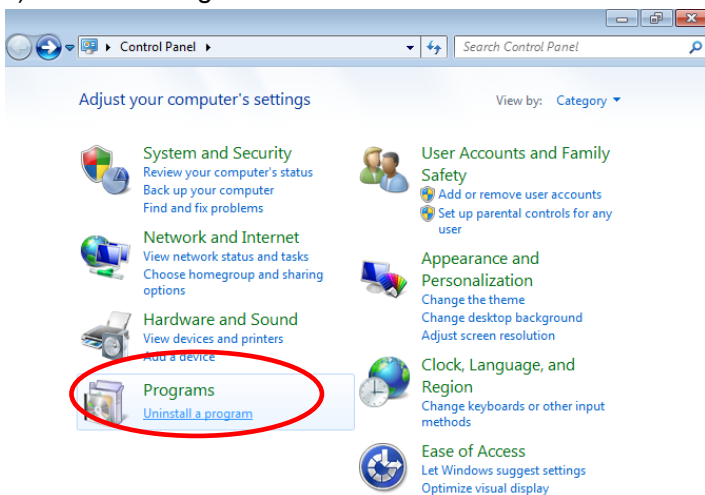
If you install 64-bit version of CardMark into the 32-bit OS or vice versa by mistake, you need to uninstall the software and install the correction version.

1.3.1. Windows 7

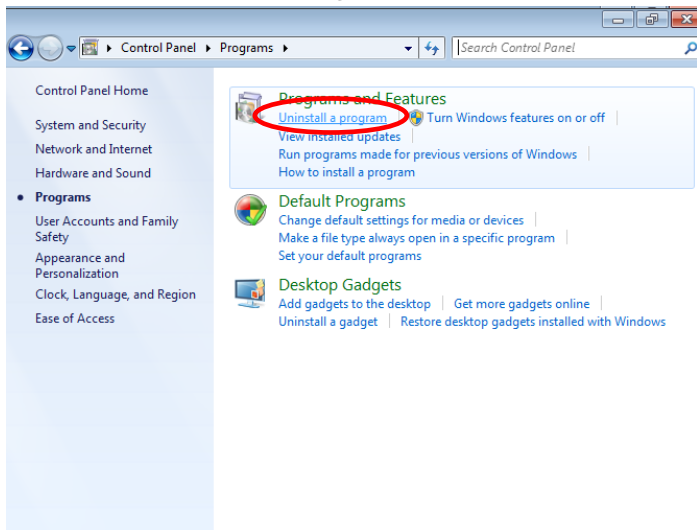
1) Open "Control Panel".



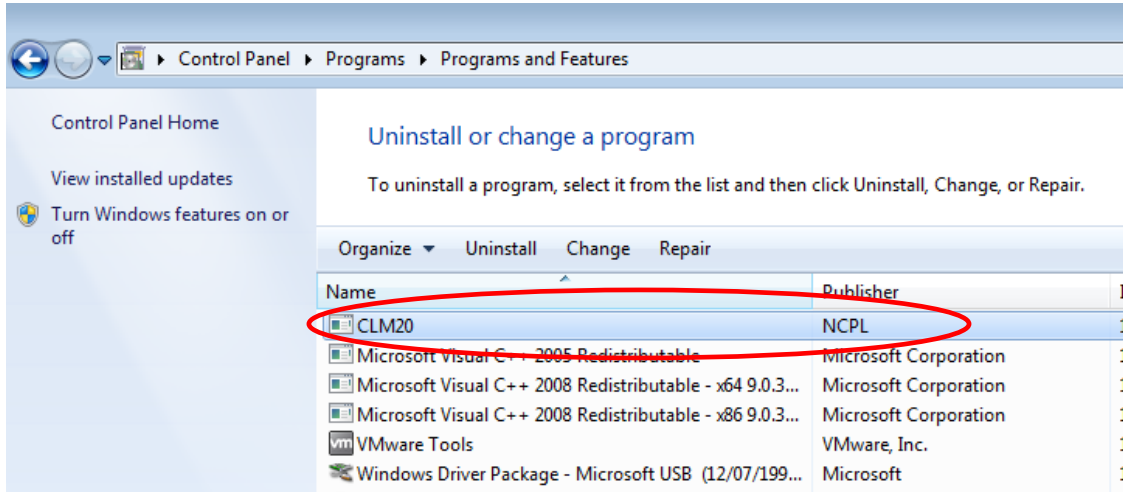
2) Select "Programs"



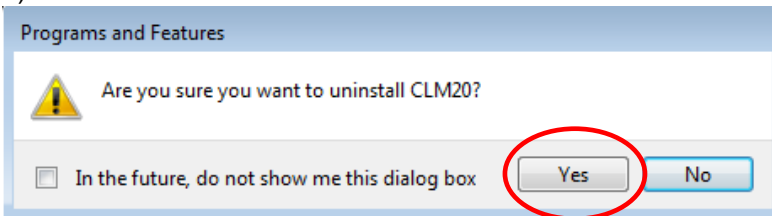
3) Select "Uninstall a program".



4) Select (double-click) "CLM20".

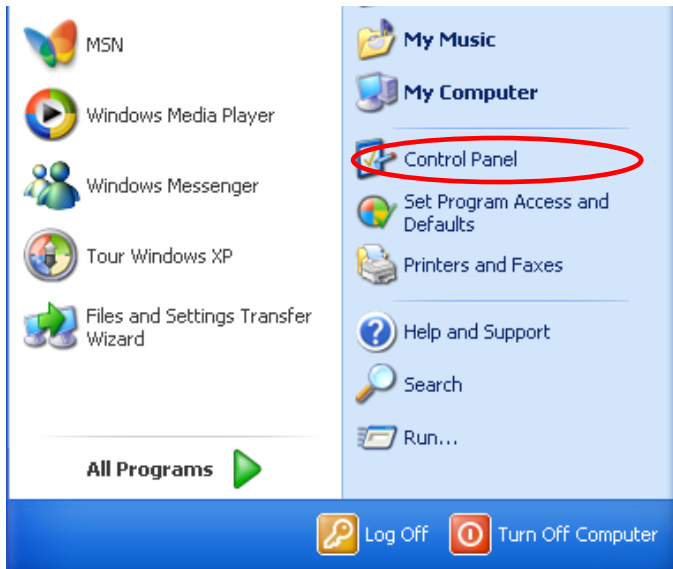


5) Press "Yes".

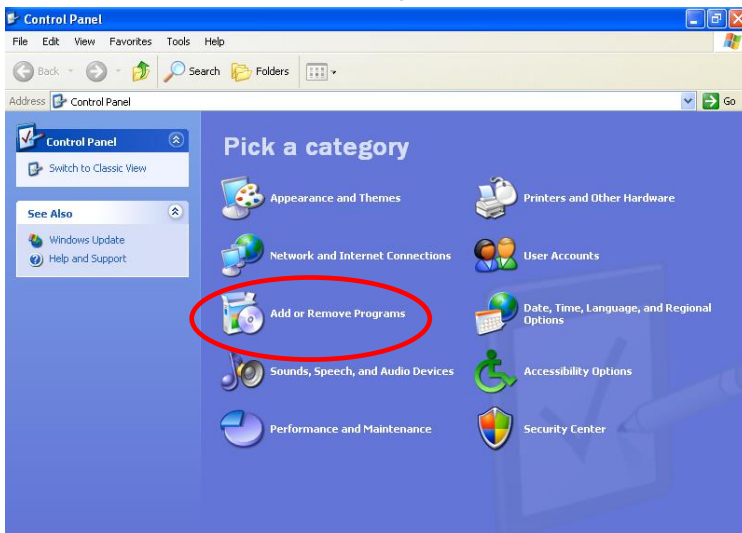


1.3.2. Windows XP

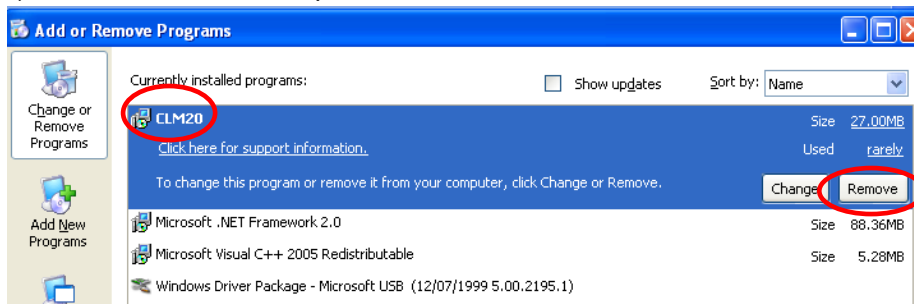
1) Open "Control Panel".



2) Select "Add or Remove Programs".



3) Select "CLM20" and press "Remove".

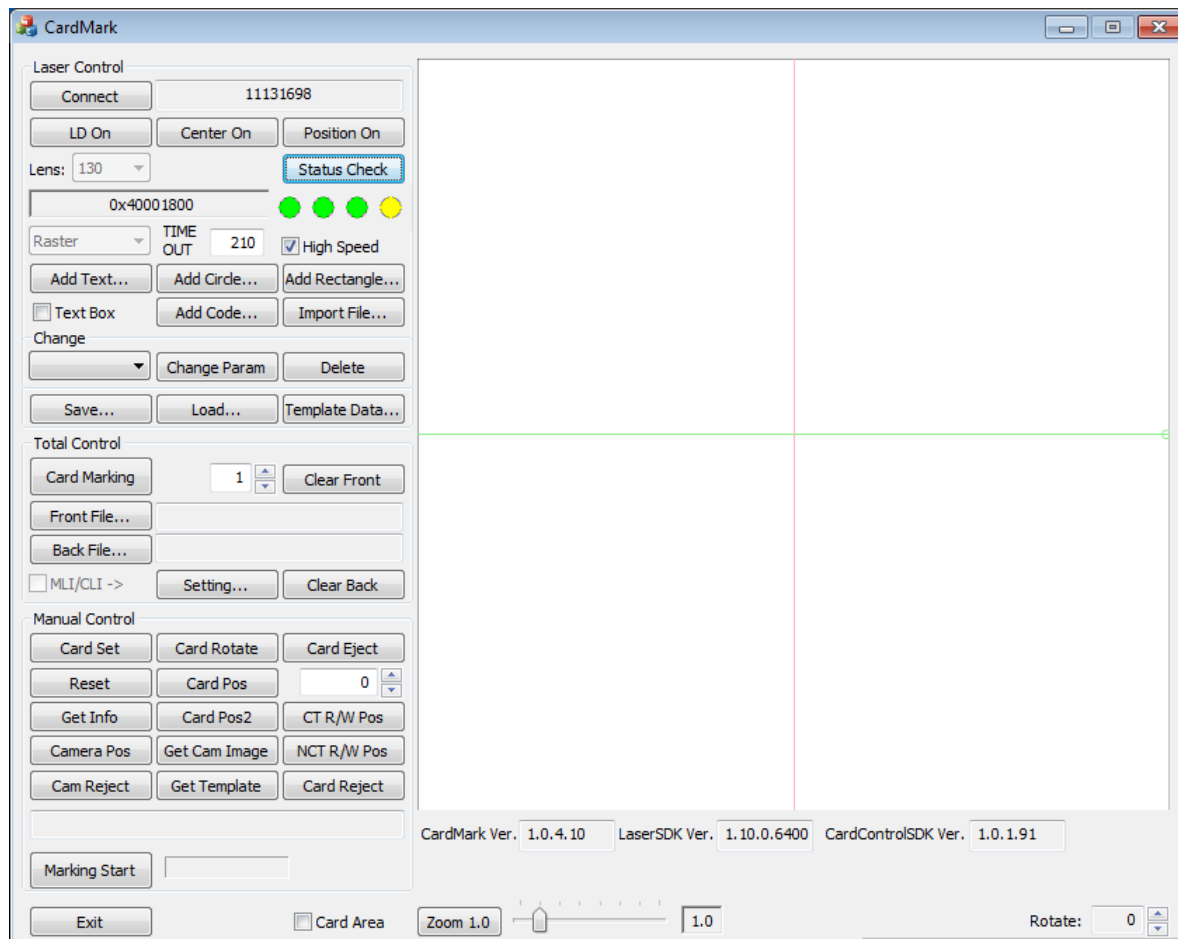


2. Screen Images

CardMark enables feeding of Card and marking using the application created by SDK. It is used for evaluation and adjustment.

2.1. Startup

Run CardMark.exe. Following dialogue will be displayed.



2.2. Laser Control

Clicking this will make the connection with CLM-20 (normally this is not needed because of automatic connection)

When the connection is made, serial number of the laser control unit will be indicated.

Laser switch (Push switch at the front of power supply)

Guide beam illumination center

Laser status Displayed in code (hexadecimal)

Marking Time-out period [s]

Specify marking speed
Normal speed: displayed as [speed (normal)]
At high speed: displayed as [speed (fast)]

Guide beam illumination Marking range

Laser status Check and display

Power: On: Yellow / Off: Gray
Emergency: On: Red / Off: Green
LD fault: On: Red / Off: Green
Interlock: On: Red / Off: Green

Interface Elements:
 - Connect button
 - Serial number: 10281456
 - LD On button
 - Center On button
 - Position On button
 - Lens: 130
 - Status Check button
 - Hexadecimal code: 0x40000800
 - Raster dropdown
 - TIME OUT: 210
 - High Speed checkbox

2.3. Add item

Add Text button

Add Circle/Ellipse

Add Rectangle

Add Bar Code button

Import File button

Interface Elements:
 - Add Text...
 - Add Circle...
 - Add Rectangle...
 - Text Box checkbox
 - Add Code...
 - Import File...

2.4. Edit item

Select item for edit

Change Parameter button

Delete button

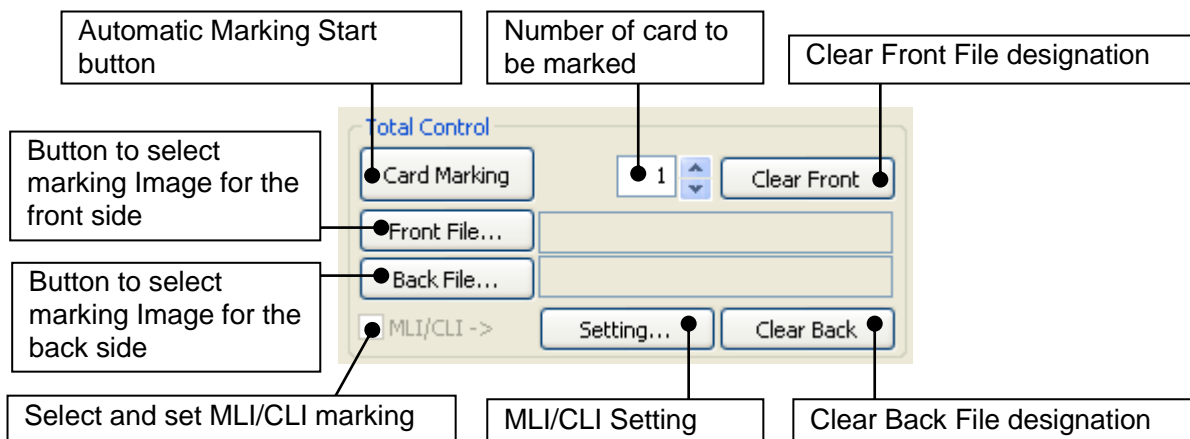
Save button

Load data button

Interface Elements:
 - Change dropdown menu
 - Change Param button
 - Delete button
 - Save... button
 - Load... button
 - Template Data... button

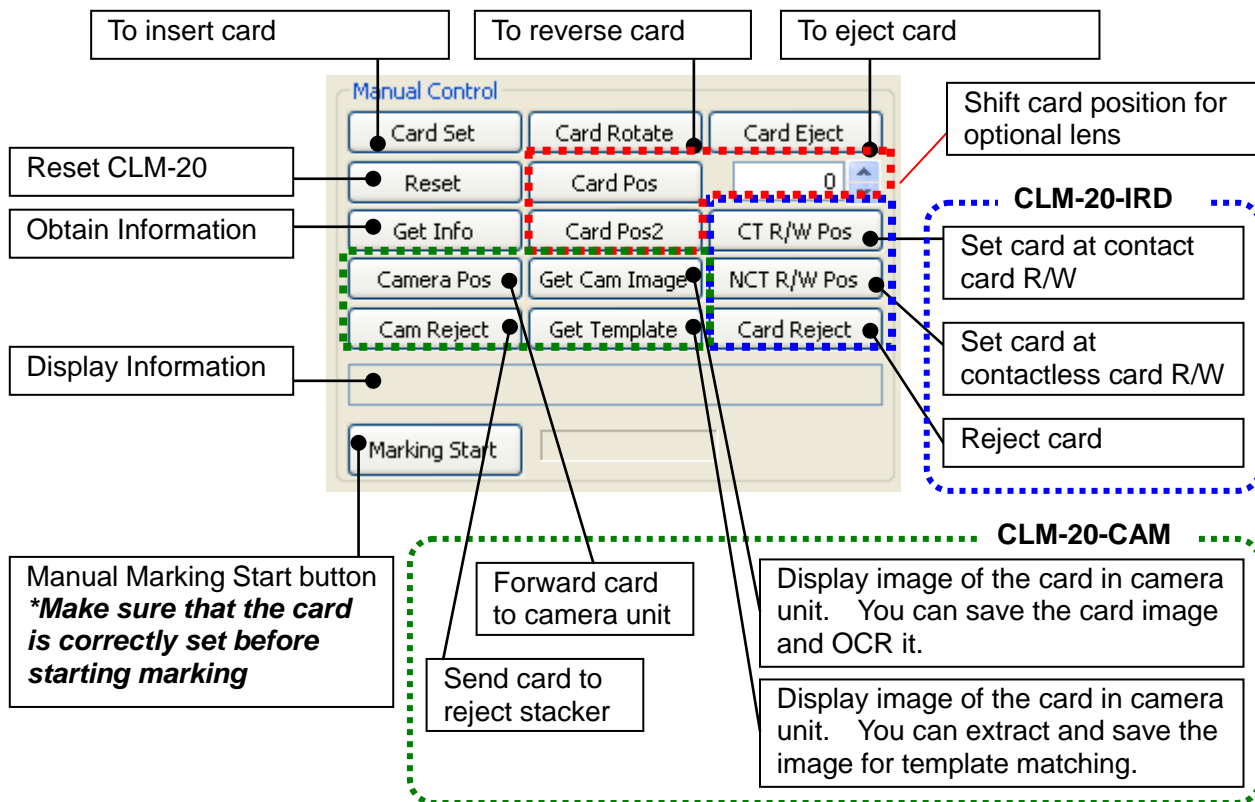
2.5. Total Control

This is the operation to automatically feed in Card, marking and feed out Card.



2.6. Manual Control

This is to make each individual operation one by one



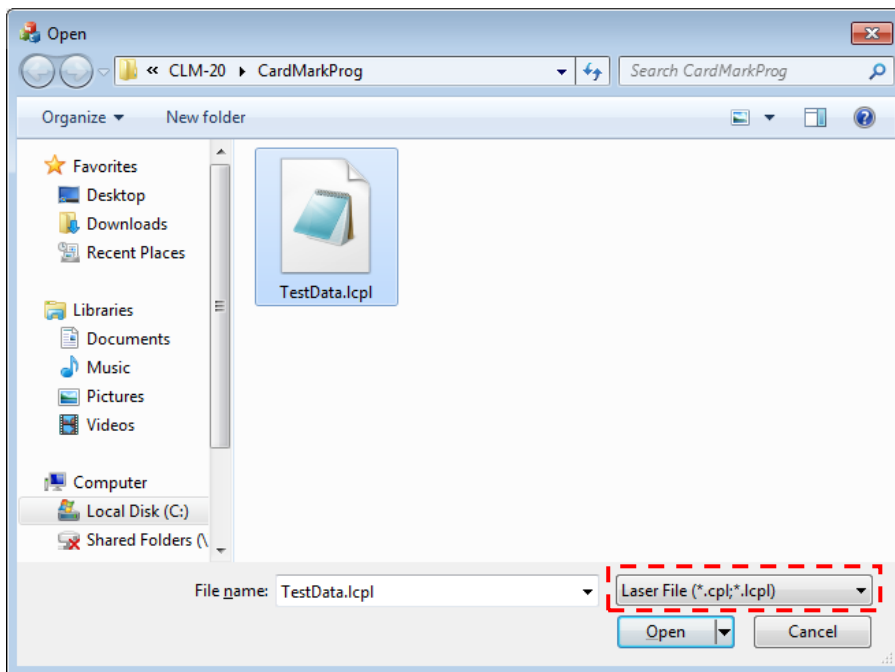
2.7. Other



3. Automatic Marking

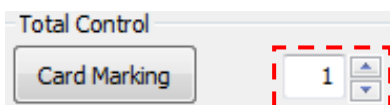
3.1. Select Marking File

Select image for the front side by clicking [Button to select marking image for front side]. If continue to mark on the back side, select image by clicking [Button to select marking image for back side]. Select file from folder. File Extension is ".lcp1"



3.2. Specify number of Marking

Specify number of marking by altering the number as shown below.



3.3. Start Marking

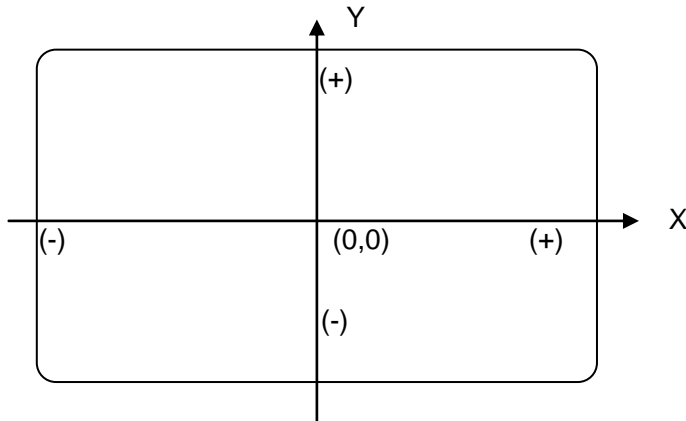
Clicking [Automatic Marking Start button] will let you start the Marking (it is common between manual insert and hopper connection).

4. Add/Edit/Delete

4.1. Common

4.1.1. Specify position

Enter values at [X:] and [Y:] of the popup window. Specify coordinate with upper left corner of the item being the basis (unit: mm)



4.1.2. Power

Specify laser output between 0 and 100 %

4.1.3. Step

Resolution

Enter a value between 7 and 100 μm .

Input value	Converted to dpi
84	300
64	400
51	500
42	600
36	700
32	800

Selecting finer resolution will increase the marking time as well as increasing energy per unit area therefore resulting in a darker density. Adjust density by power.

4.1.4. Speed

Enter a value between 2 and 100 %.

4.1.5. Pulse

Times of marking for pixel.

Enter a value between 1 and 10 times.

4.1.6. Pass

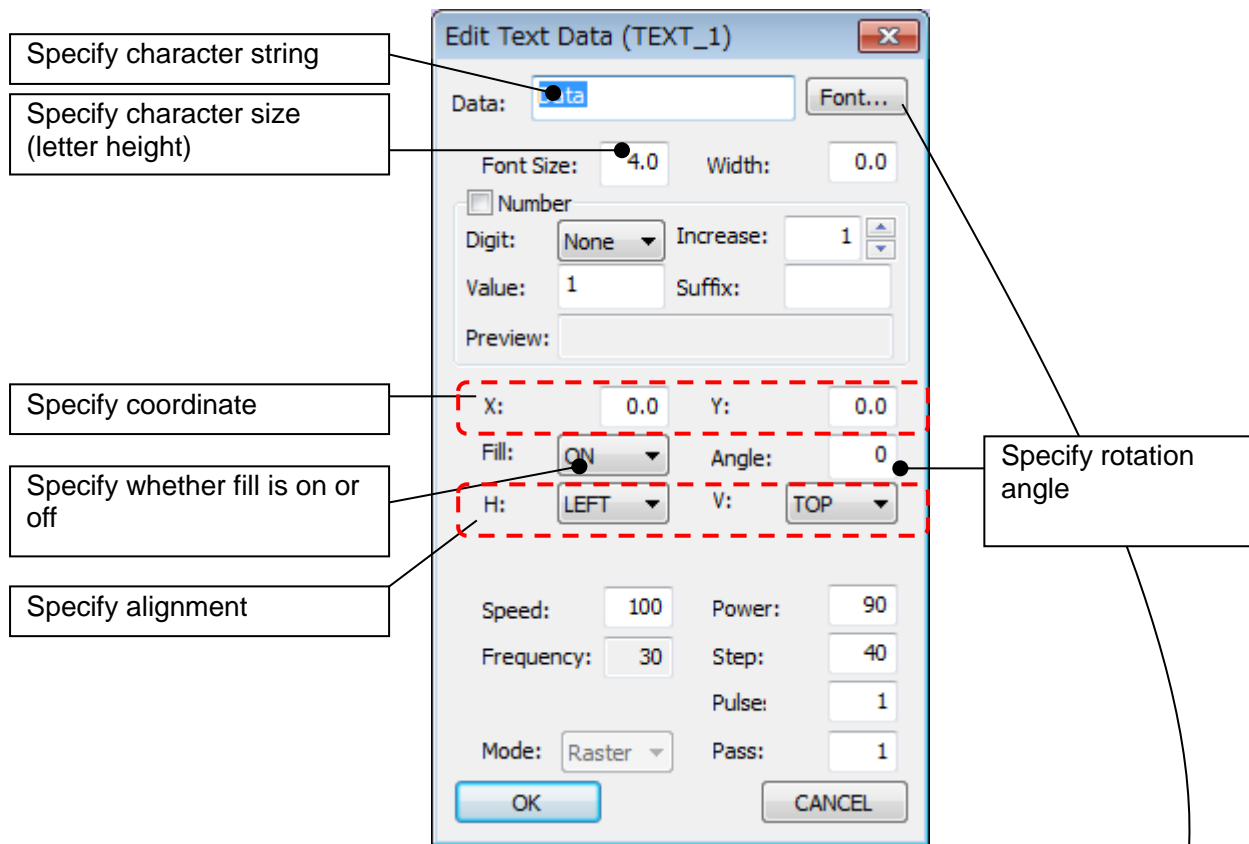
Times of marking for object.

Enter a value between 1 and 10 times.

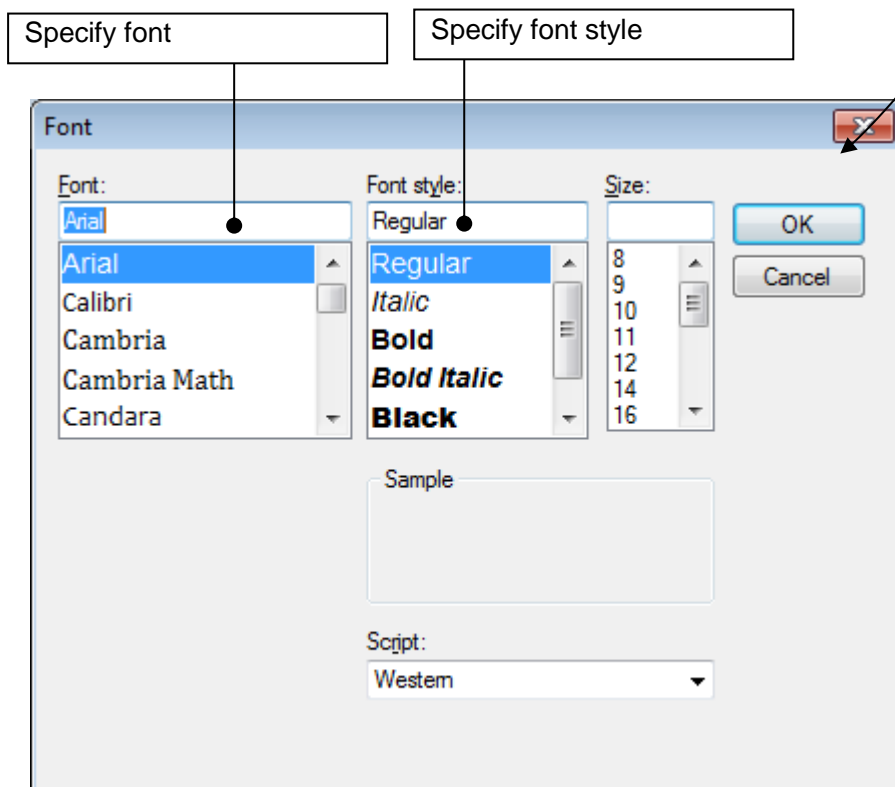
Edited data may be saved by clicking [Save] button

4.2. Add Text

By Clicking [Add Text...] button, following Window will appear on the screen.

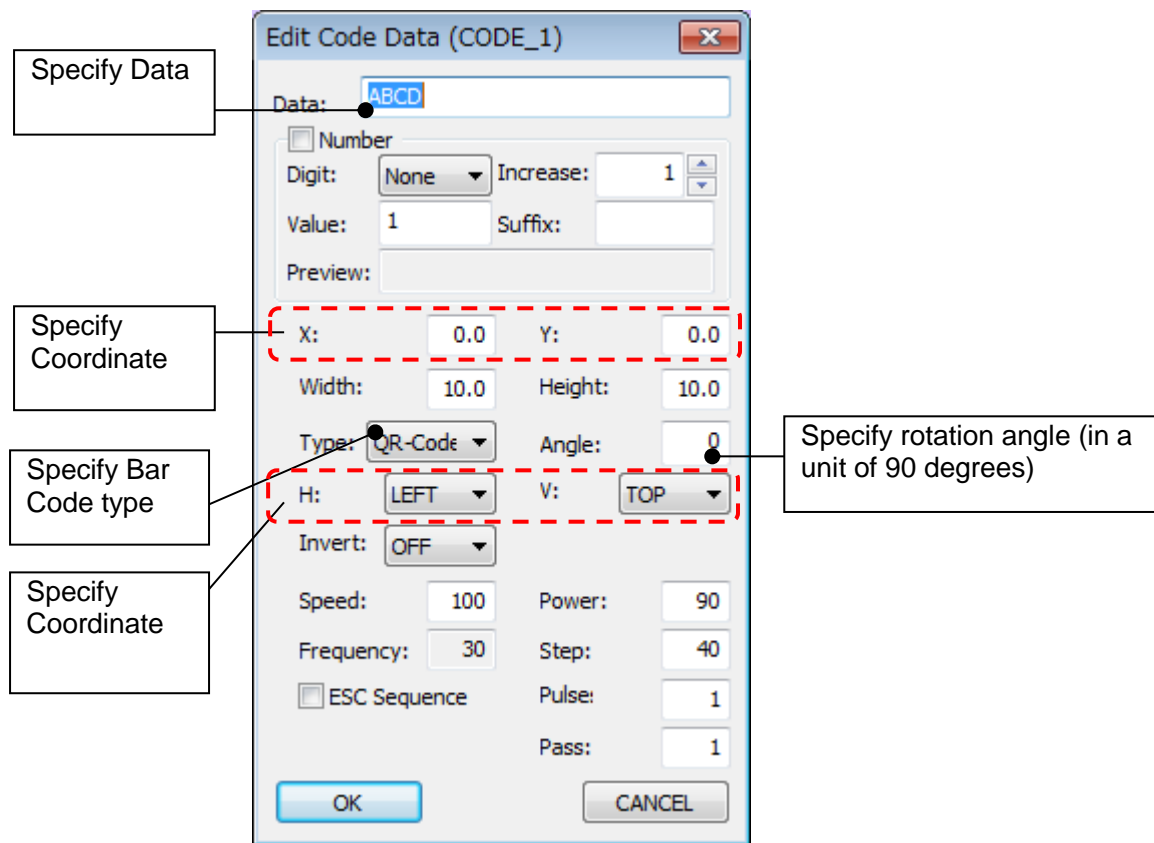


Click [OK] after specifying parameters will fix the selected parameters.






4.3. Add Bar Code

By clicking [Add Bar Code...], Widow shown below will appear.

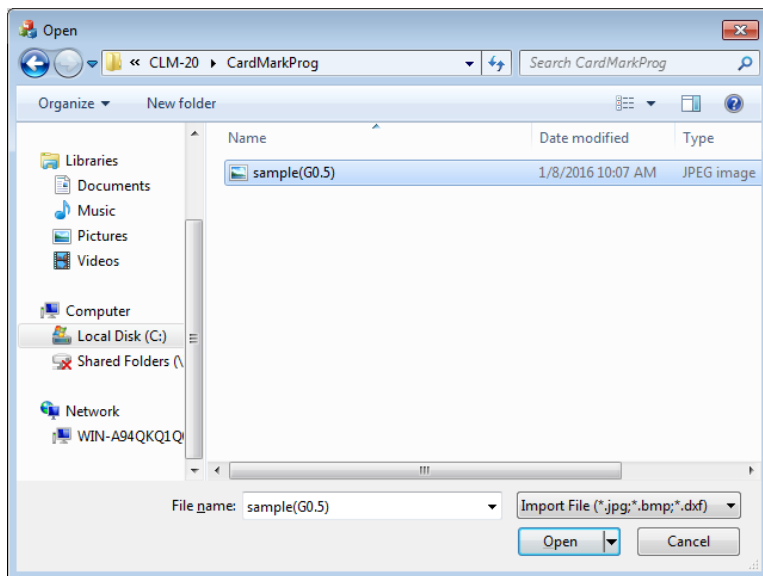


Click [OK] after specifying parameters will fix the selected parameters

Code examples	
QR-Code	
Data Matrix	 <small>http://en.wikipedia.org/wiki/Semacode</small>
FPD417	

4.4. Import File button

By clicking [Import File] button, window to select file as indicated below will appear. Select file and click [Open (O)].



Select file to add and click [Open].

Specify image file

Specify coordinate

Maintain Width as basis, alter Height to keep the ratio the same as the original image

Maintain Height as basis, alter Width to keep the ratio the same as the original image

Specify rotation angle (in a unit of 90 degrees)

Specify Alignment

Note: Specify [Width] and [Height] in the same ratio as the original image data.

Example if the image is 750 pixels x 1000 pixels, 30mm (width) and 40mm (height) could be among the combinations of width and height.

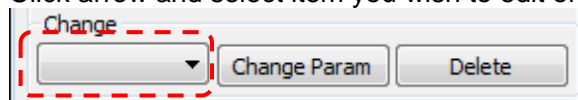


With a wrong combination, resulting image could be like followings.



4.5. Edit/Delete

Click arrow and select item you wish to edit or delete



Selecting item you wish to delete and clicking [Delete] will cause item to be deleted (Please note that you cannot “undo” delete).

Text

Edit Text Data (TEXT_1)

Data:

Font Size: Width:

Number

Digit: Increase:

Value: Suffix:

Preview:

X: Y:

Fill: Angle:

H: V:

Speed: Power:

Frequency: Step:

Pulse:

Mode: Pass:

Code

Edit Code Data (CODE_1)

Data:

Number

Digit: Increase:

Value: Suffix:

Preview:

X: Y:

Width: Height:

Type: Angle:

H: V:

Invert:

Speed: Power:

Frequency: Step:

ESC Sequence Pulse:

Pass:

Rectangle

Edit Rectangle Data (RECT_1)

X: Y:

Width: Height:

Angle:

Fill:

H: V:

Speed: Power:

Frequency: Step:

Pulse:

Mode: Pass:

Circle

Edit Circle Data (CIRCLE_1)

X: Y:

Width: Height:

Angle:

Fill:

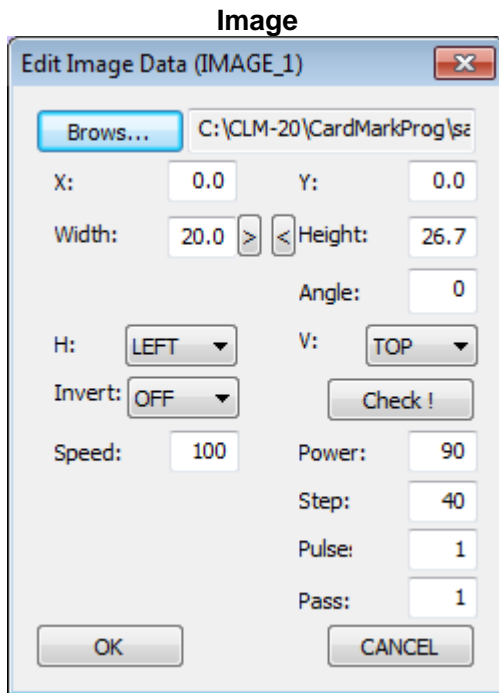
H: V:

Speed: Power:

Frequency: Step:

Pulse:

Mode: Pass:

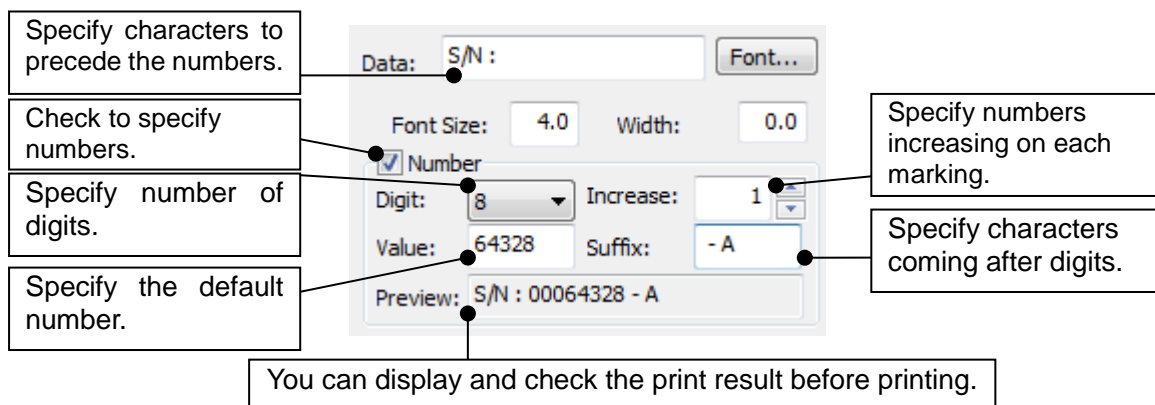


By selecting the item you wish to change and clicking [Change Param.], property dialog will appear. If you click [Check], displayed information will be updated. If you click [OK] edited information will be fixed.

4.6. Sequential Numbering

Characters and barcodes can be designated the sequential numbering function.

It is for the marking of serial number or anything required of sequential numbering on a card. In the use of characters and barcodes, designate the following sections.



Attention:
 Number is counted up after the marking operation is done.
 It is counted up even when the marking ended in error.
 Please do not forget to save the file each time you temporary stop marking operation using this function.
 After read the file, please make sure a number is correct.
 In the use of Auto marking function, an updated default value is saved automatically in a file.

5. Example for Ordinary Marking

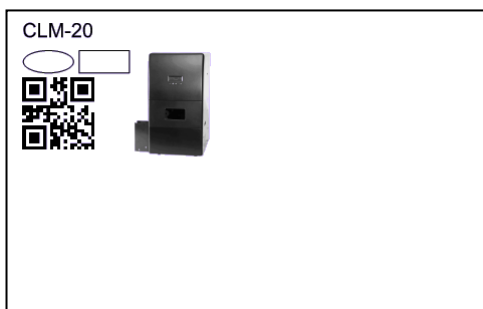
This explains how to use the software at ordinary marking using examples.

5.1. Example

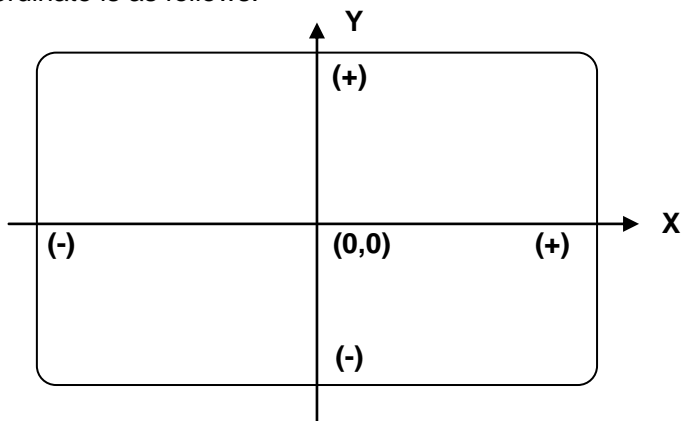
CardMark can create the six kinds of data: text, circle (oval), rectangle, code and images. The sample data to be created here are as follows.

- (1) Text : "CLM-20" Font size 4 mm
- (2) Oval: width 9 mm, height 4 mm
- (3) Rectangle: width 9 mm, height 4 mm
- (4) Code: QR code "CLM-20" width 13 mm, height 13 mm
- (5) Image: BMP file width 14 mm, height 20 mm

The marking image is follows.



Coordinate is as follows.

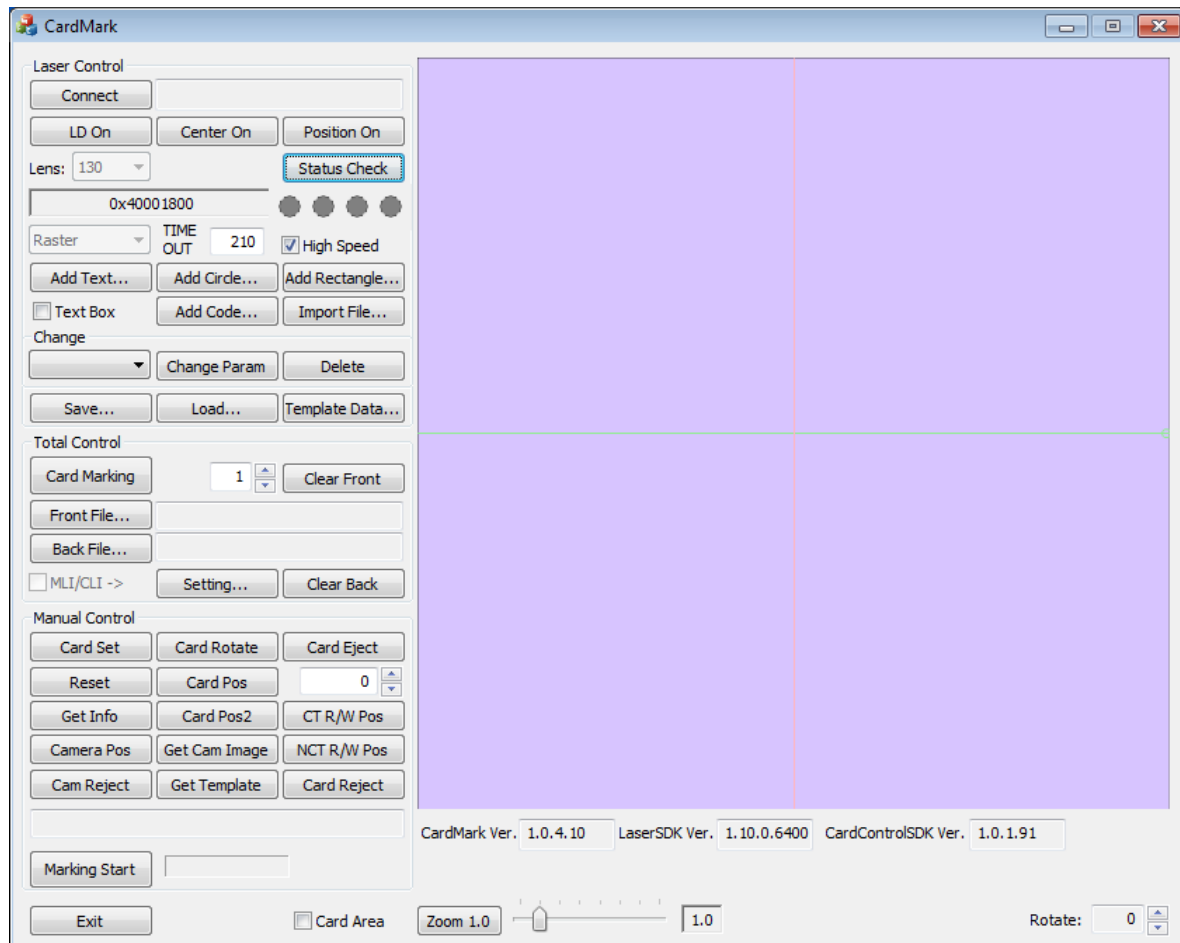


The reference coordinate (coordinate of the upper left corner of the data) of each data is shown in the below table.

No.	Type	Coordinate		Unit [mm]
		X	Y	
1	Text	-40	25	
2	Oval	-40	20	
3	Rectangle	-30	20	
4	Code	-40	15	
5	Image	-20	20	

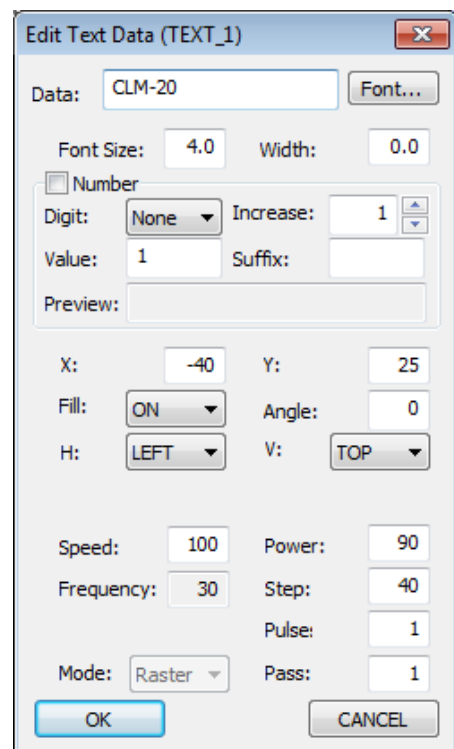
5.2. Creating the data

From here, we actually create the data.
Check the box [Card Area] to display the frame of card.

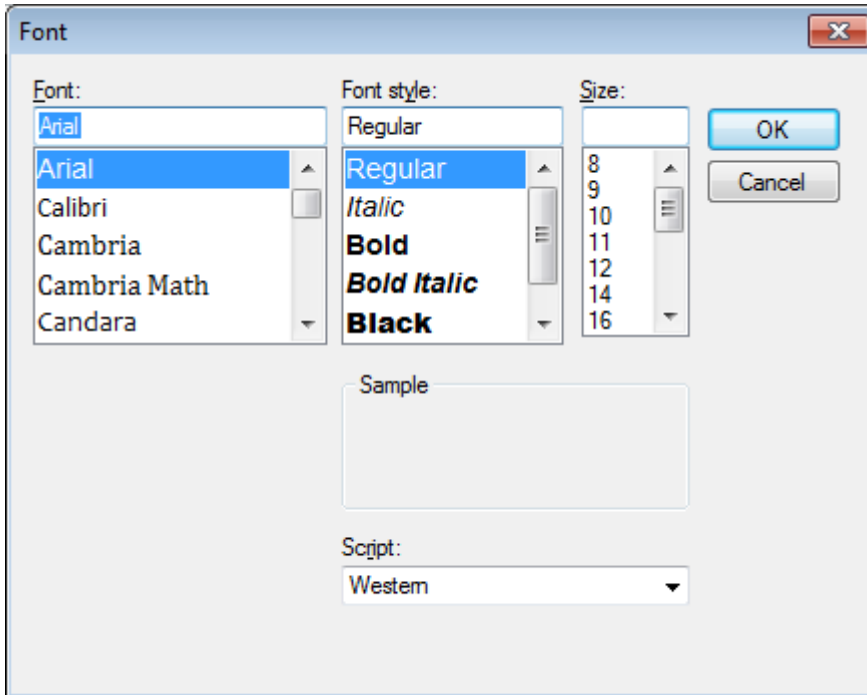


5.2.1. Adding a text

Text [CLM-20] font size 4 mm
Click [Add Text...] to display the dialogue shown on the right.
Set parameters as shown on the right.

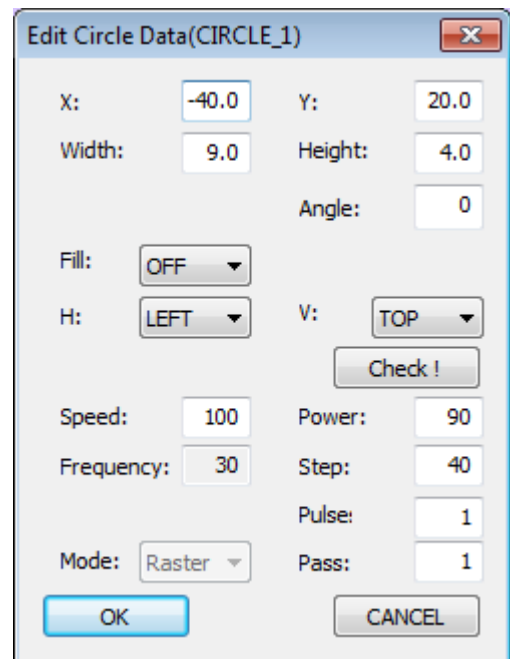


Then, click [Font...] to modify settings related to the font.
 Click [OK] to close the dialogue and display the setting result.
 For this example, configure as shown.



5.2.2. Adding circle (oval)

Oval: width 9 mm, height 4 mm
 Click [Add Circle...] to display the dialogue shown below.
 Set parameters as shown below and click [OK] to close
 the dialogue and display the setting result.

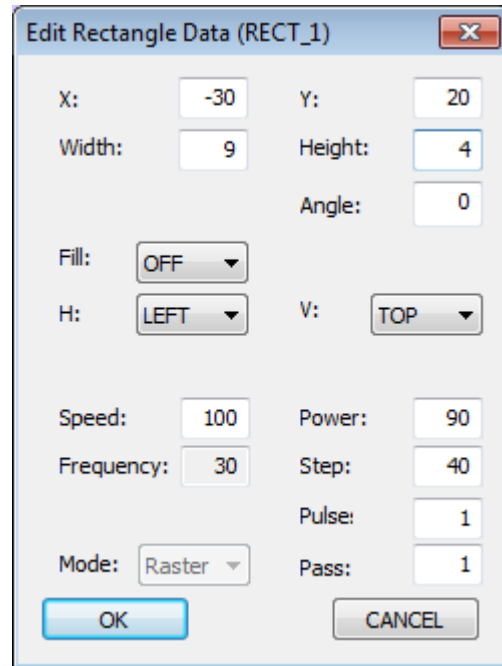


5.2.3. Adding rectangle

Rectangle: width 9 mm, height 4 mm

Click [Add Rectangle...] to display the dialogue shown on the right.

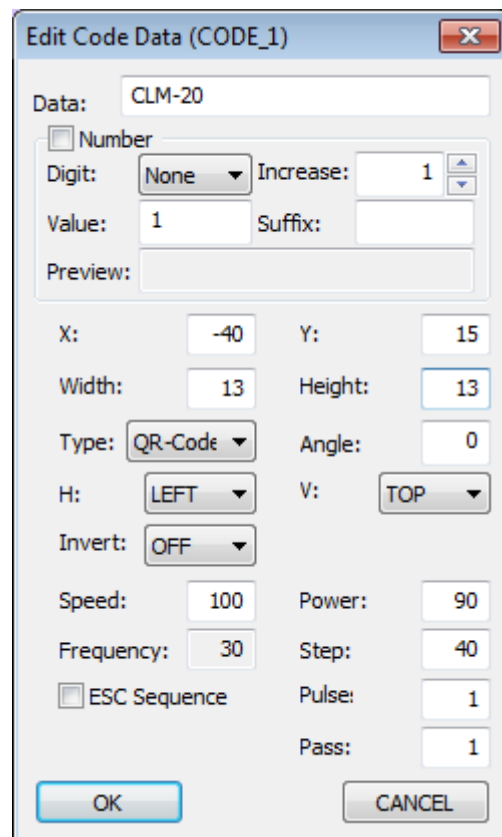
Set parameters as shown on the right and click [OK] to close the dialogue and display the setting result.



5.2.4. Adding code

Code: QR code "CLM-20" width 13 mm, height 13 mm
Click [Add Code...] to display the dialogue shown on the right.

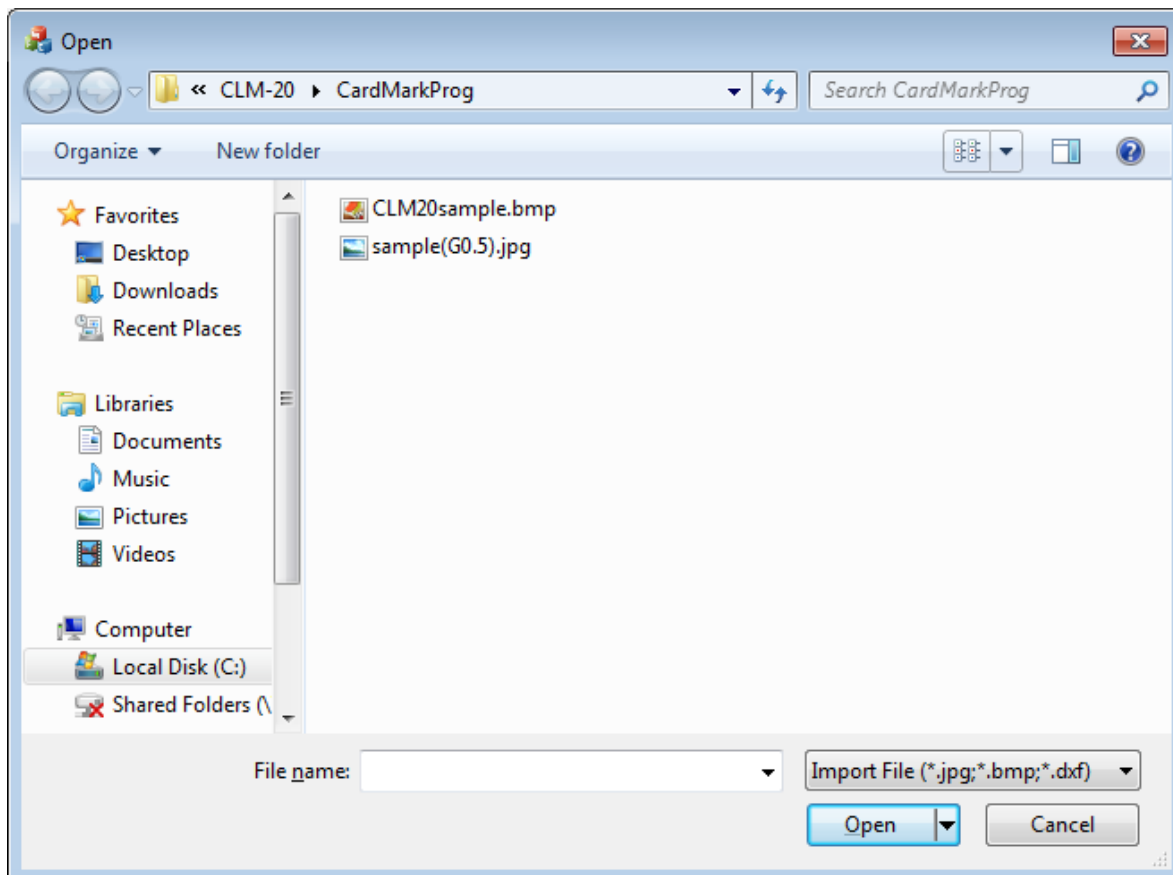
Set parameters as shown on the right and click [OK] to close the dialogue and display the setting result.



5.2.5. Adding image

BMP file width 14 mm, height 20 mm

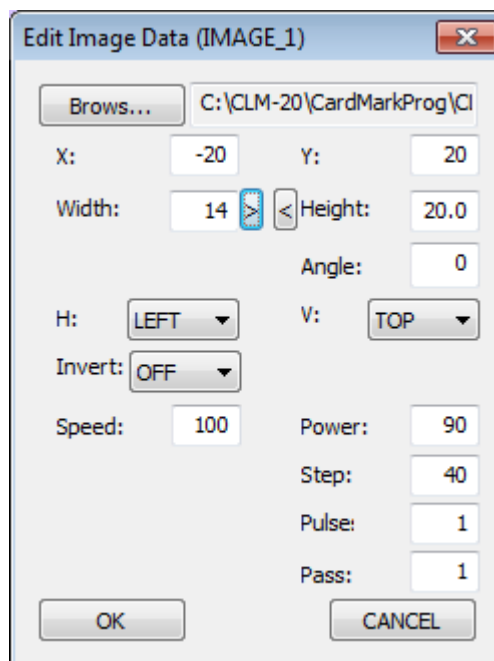
Click [Import File...] to display the following dialogue.



Select an image file and click [Open] to close the dialogue and display the dialogue shown on the right. Set the parameters as shown on the right.

For example, modify the Width value and then click [>] to make automatic configuration by calculating the height value with maintaining the aspect ratio.

Set parameters as shown on the right and click [OK] to close the dialogue and display the setting result.



5.3. Saving the marking data (.lcp)

(Extension of the file may be .cpl in older versions)

You can save the marking data with the extension “.lcp” by clicking on the button [Save...] on the initial screen of CardMark.

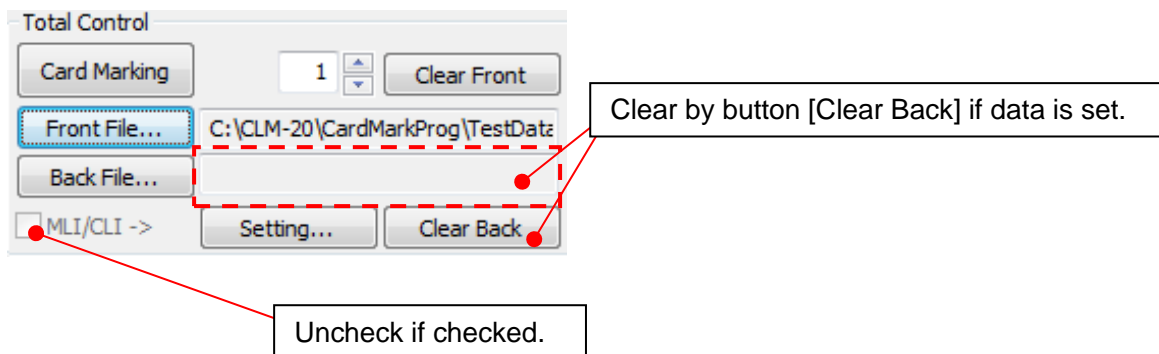
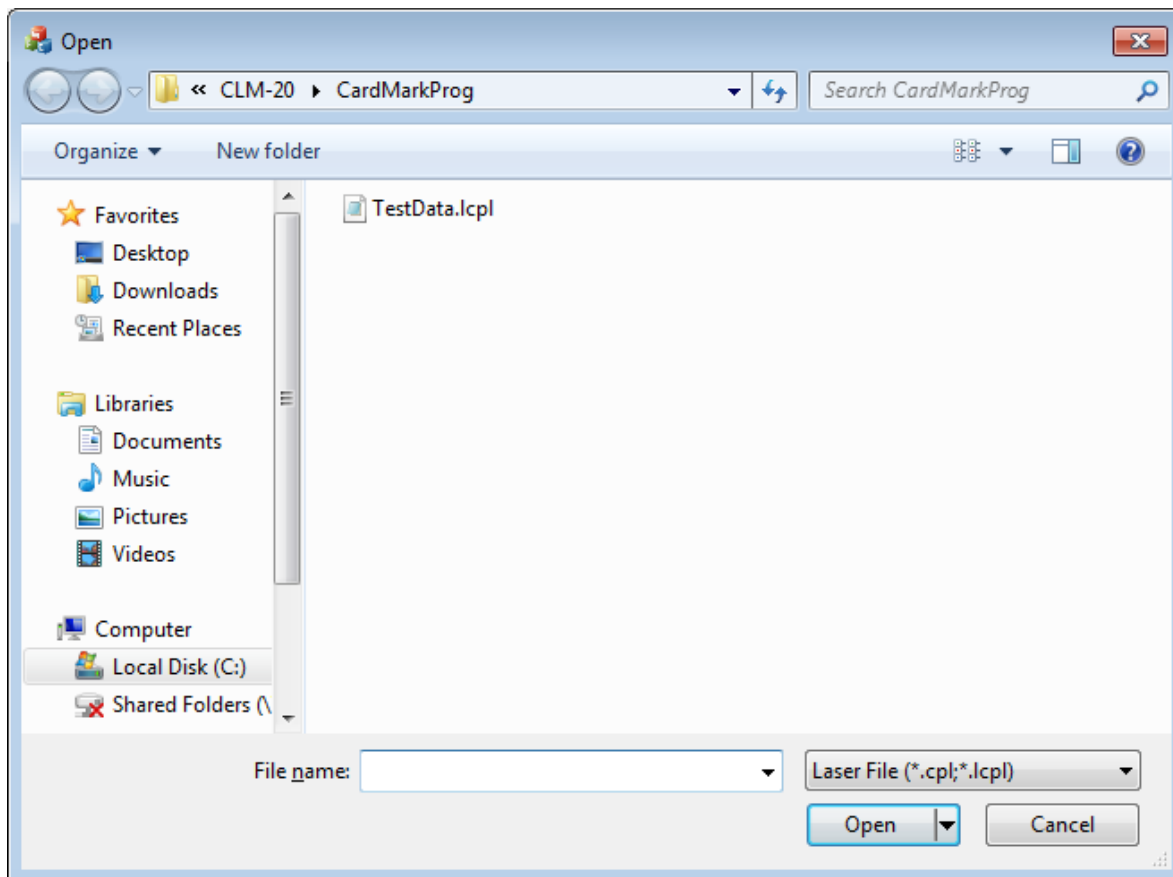
Note:

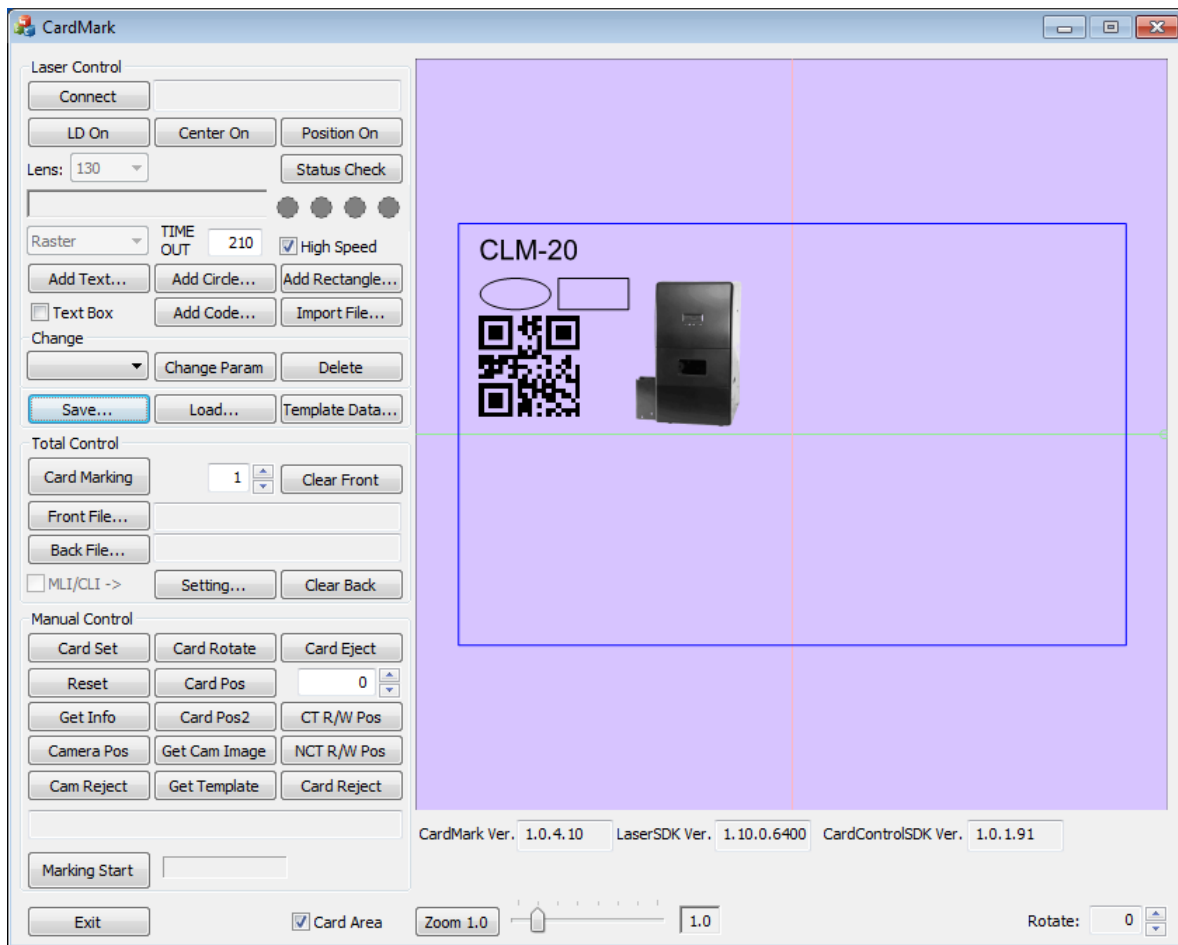
The file name of image file will be memorized with the absolute path. Therefore the image cannot be loaded when the corresponding folder is modified after saving the image file. In that case, open the marking data file (.lcp) as text file, search its contents and modify the path information.

5.4. Marking

Now, make the marking on the front side of card.

Click [Front File...] to display the following dialogue and specify the data file that you saved previously.





Set the number of cards and click [Card Marking].
 Insert the card after the shutter at the entrance of equipment opens.
 The equipment will take in the card, make the marking on it and eject it.