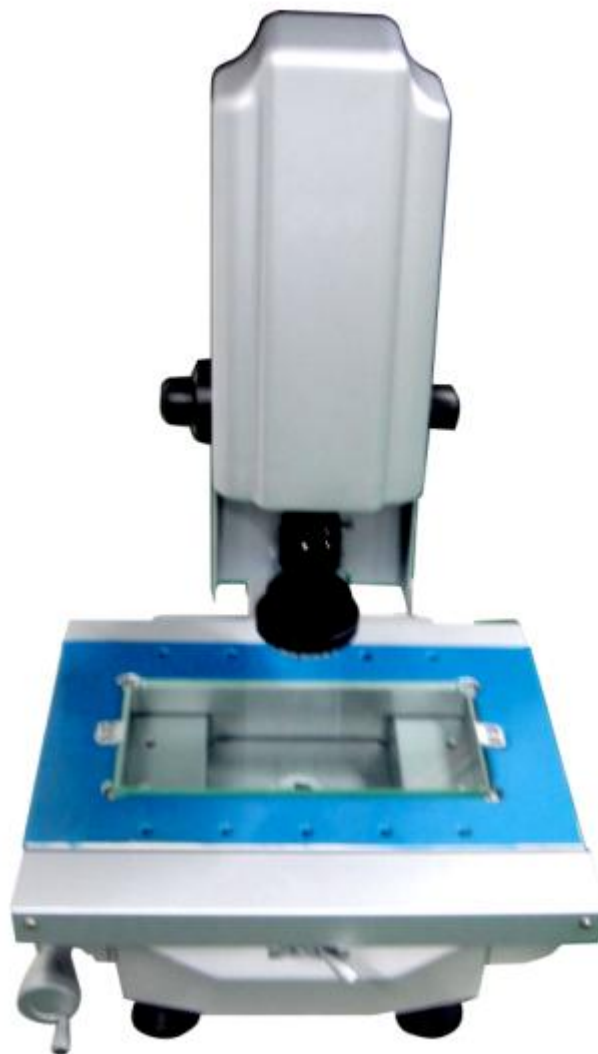


MUMA200 / Aluminum alloy vision measuring machine

Hardware Manual



Jul-2012

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Notice

Dear Customers:

Thank you very much for buying the aluminum alloy vision measuring machine (MUMA200)! To insure the safe and efficient use of this machine, please read this manual carefully before starting to operate.

In order to enable you to master the operation methods as soon as possible, we prepared the manual for you specially. We try our best to make its presentation more comprehensive and concise, from which you can get knowledge about the system configuration, installation steps and operation methods. We strongly recommend you to read carefully before use the product; this will help you to make better use. If there are operations which are not according to the manual, we will not assume responsibility for the relevant losses.

The applicable conditions and environmental requirements mentioned in the manual are just fit for the same model type as aluminum alloy vision measuring machine (MUMA200), and will not indicate the actual configuration of software and hardware products and interfaces. Please get the actual configuration from the packing list which is accompanied with the machines, and note that the manual does not apply to other products models and configurations.

We have done our best efforts to try to avoid human errors and ensure the information accurate and reliable in the manual, but inevitably there may be some errors which were not found before printing, as well as those beyond our control, such as omissions in printing, binding, distribution aspects. If there are, please contact our company or services department for advices.

In order to enhance performance and reliability of the machine and parts, there may be a little adjustments for the hardware or software configuration, so there is likely to cause some inconsistency between the manual and the actual situation, but this does not affect the machine use, if there is difference, please access to the actual product, or contact the company or the relevant department for consultative services.

Thanks a lot for your kind cooperation and supports !

1. MUMA200 Packing List

The packing cases fitting with precision components, please handle with care, and avoid falling from the high place; Open the case to check the fittings according to the packing list. If there are inconsistent with the facts, please contact after-sales dept.

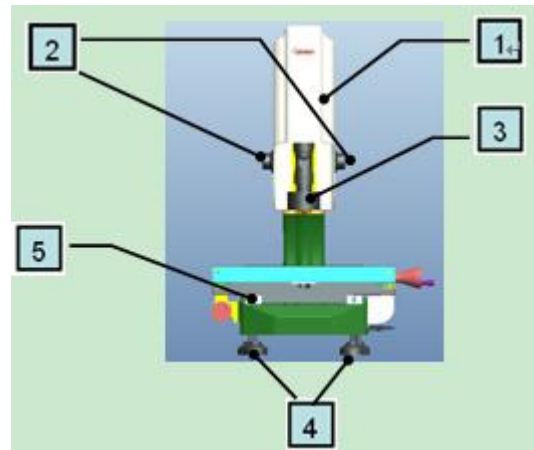
***Note: Please make sure to use the original configuration of the USB cable, otherwise, we will not assume any responsibility which is due to the improper use.**

***The picture is only for reference; please make the object as the standard.**

2. MUMA200 Instruction

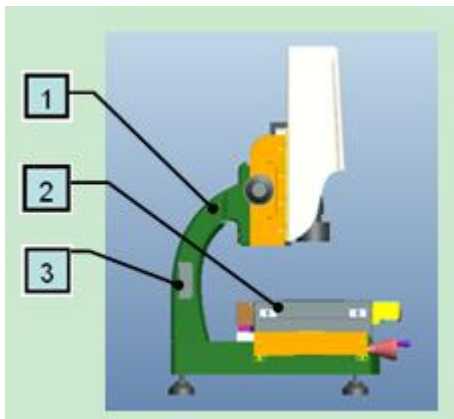
2.1 Front View

- 1: MUMA200 cover
- 2: Z axis fine-turning
- 3: Lens
- 4: Machine feet
- 5: Machine guide rail lock



*** Note: before using machine, please release guide rail lock firstly.**

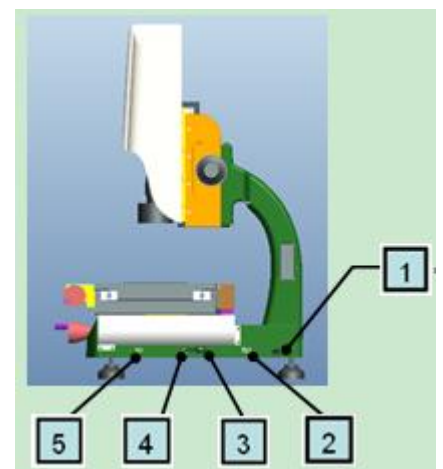
2.2 Left View



- 1: Stand Column
- 2: Workstage
- 3: Stand column hole cover

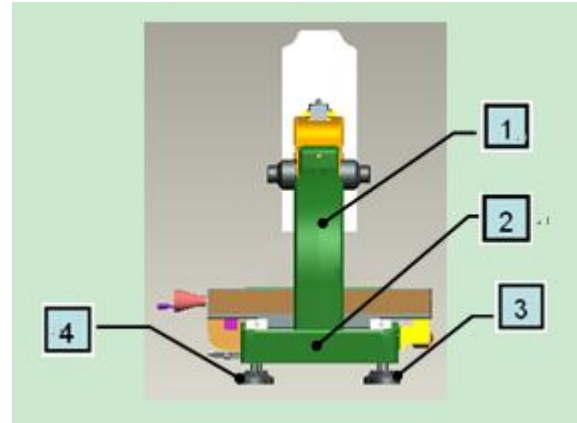
2.3 Right View

- 1: Linear scale ruler wire enter
- 2: USB light signal connection: connect USB integration by USB signal cable
- 3: USB camera signal connection: connect USB integration by USB power cable
- 4: External power connection: to use 12V power adapter to connect external power for machine.
- 5: USB counter card signal connection: to connect USB integration.



2.4 Back View

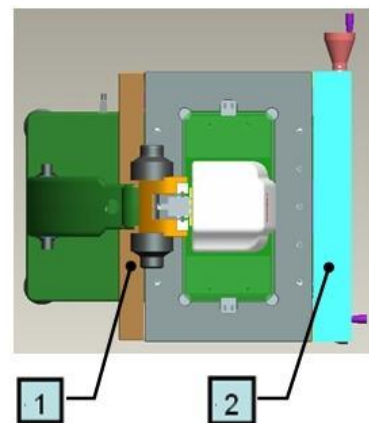
- 1: Stand Column
- 2: Machine Base
- 3&4: Machine feet



*** Note: When move machine, please hand on stand column and machine base, not hand on others.**

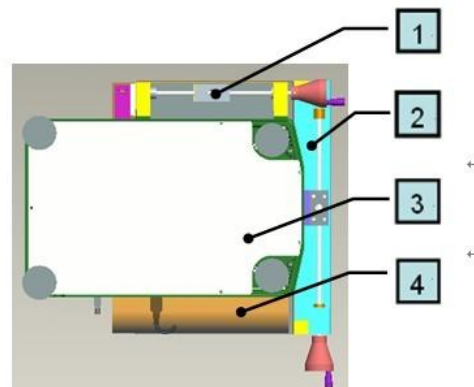
2.5 Top View

- 1: X axis scale ruler
- 2: X axis transmission



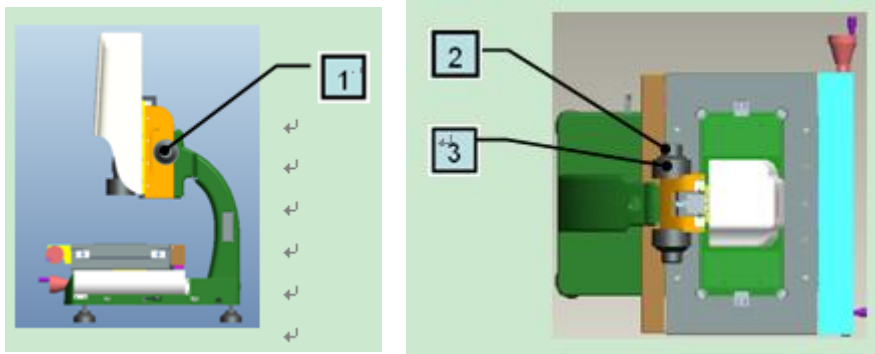
2.6 Bottom View

- 1: Y axis transmission
- 2: X axis transmission
- 3: Machine base cover
- 4: Y axis scale ruler



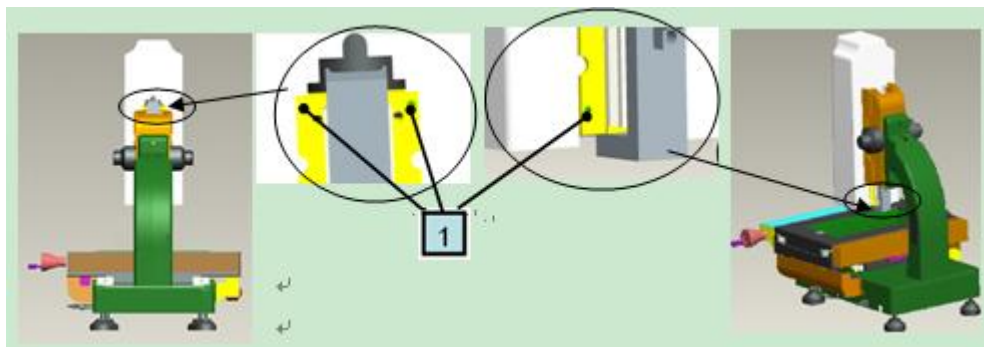
*** Note: Machine base cover cannot be under great pressure, please handle with care.**

2.7 Roughly and Fine turning



- 1: Turn it to move Z axis up and down, divide into roughly and fine
- 2: Fine turning: move Z axis to reach a clear image which you expect
- 3: Roughly turning: move Z axis up and down quickly, handle slightly

2.8 Cover



- 1: 4 grub screws: fasten cover

Note: When remove cover, move Z axis up by roughly turning and loosen the two upper screws by spanner, as the left picture. Then, move Z axis down and loosen the two lower screws by spanner, as the right picture. All these done, remove the cover up slightly.

When replace the cover, aim at the cover groove and put it back slightly. Then tighten 4 grub screws.

Suggestion: If not necessary, please don't remove the cover.

3. Install MUMA200

3.1 Computer request

- CPU: Pentium or better host computer(Advise CPU: Pentium 4 or better one)
- RAM-Memory: At least 256MB or more(Advise memory: 512MB)
- HD-Hardware: The free disk space should be at least 50MB or more
- Printer-Printer (Optional, use for printing the report data)
- OS-Operating System :Windows 2000 or XP
- Screen colors quality is for 32 bits, and the resolution has four kinds,1280×800, 1366×768, 1440×900 and 1920×1080. Free-running card is 256M or more.
- Input and output devices: At least 1 USB serial ports

3.2 MUMA200 Cables

3.2.1 Cables

Machine USB signal cable: both sides are for USB type, but one is small and the other is large (as pic1). Two sides of this cable are same (as pic2).

Machine external power cable: one side is circle, the other side is pin (as pic3).



Pic1



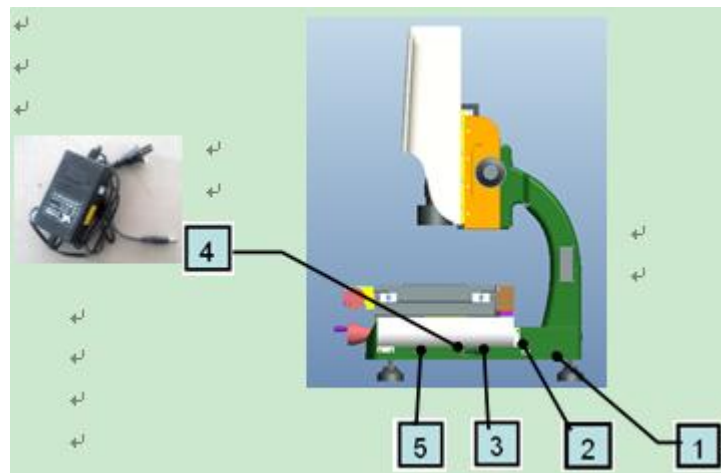
Pic2



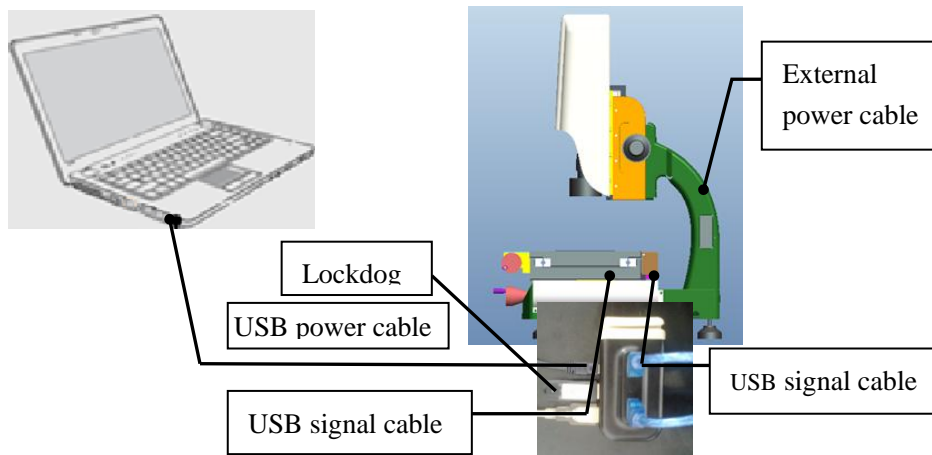
Pic3

3.2.2 Connect with computer

Machine USB power cable, one side is connected with 4 signal interface on machine , the other side is connected with computer.



Machine USB signal cable, one side is connected with three signal interface on machine, the other side is connected with USB power cable, then connect the USB power cable with the computer.



3.3 Driver Installation

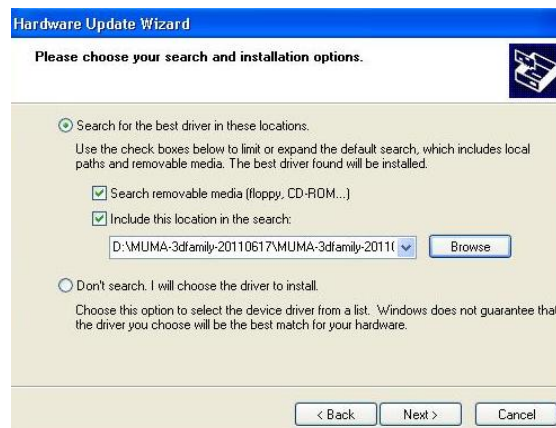
Check all the cables connection, and then open computer and installation CD.

3.3.1 Camera installation

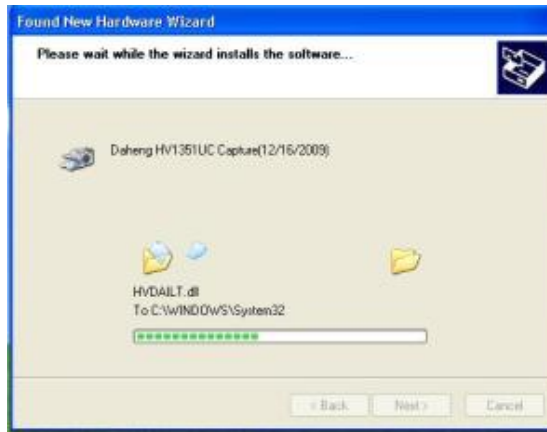
- ◆ Start the computer.
- ◆ A prompt, “Welcome to the Found New Hardware Wizard” will appear, choose “Install the software automatically (Recommended)” and click “next” to continue.



- ◆ Choose “Include this location in the search”, click “Browse” to find “CCD-Driver”, and click “next” to continue.



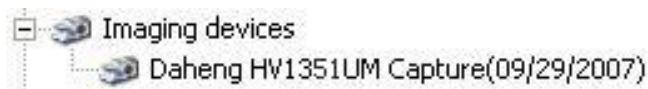
- ◆ Camera driver installation is on progress.



- ◆ Click "Finish" to complete the installation.



- ◆ In the "Device Manager" you will find following install results.

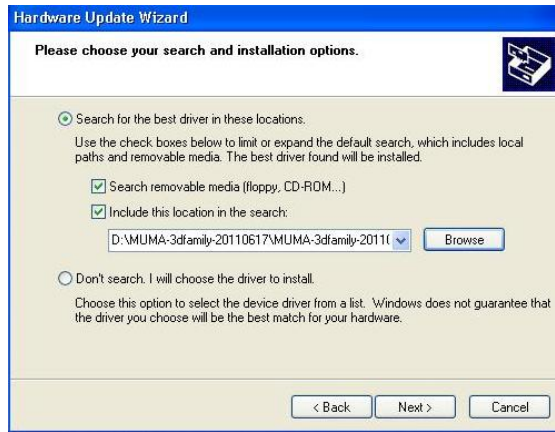


3.3.2 USB Counter card driver installation

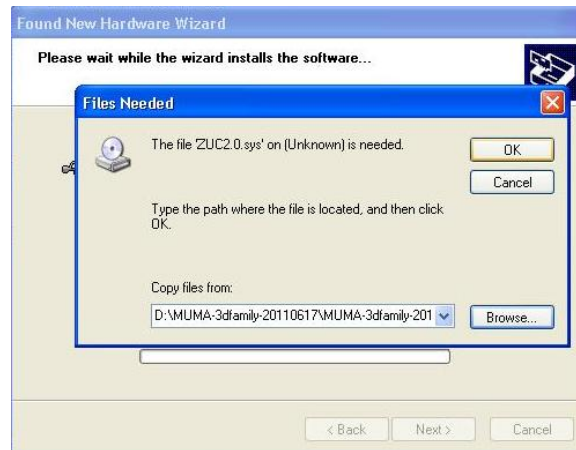
- ◆ A prompt, "Welcome to the Found New Hardware Wizard" will appear, choose "installing the software automatically (Recommended)" and click "next" to continue.



- ◆ Choose "Include this location in the search", click "Browse" to find "USB 2.0 Counter Card" and click "next" to continue.



- ◆ If the following message appears, click “Browse” to find USB 2.0 counter card driver file in CD, choose “ZUC2.0” and then click “Next” to process.



- ◆ USB counter card driver is on process.



- ◆ Click “finish” to complete the installation.

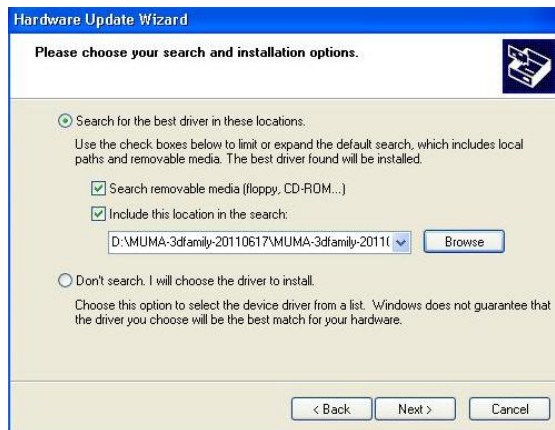


3.3.3 USB lamp driver installation

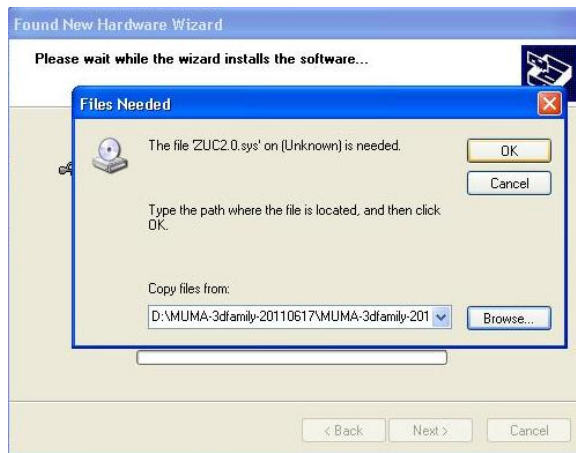
- ◆ A prompt, “Welcome to the Found New Hardware Wizard” will appear, choose “installing the software automatically (Recommended)” and click “next” to continue.



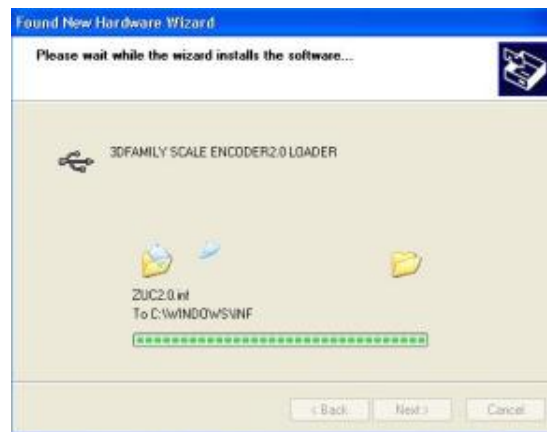
- ◆ Choose “Include this location in the search”, click “Browse” to find “USB Lamp” and click “next” to continue.



- ◆ If the following message appears, click “Browse” to find USB Lamp file in CD, choose “MumaLampUsb” and then click “Next” to process.



- ◆ USB lamp driver is on process.



- ◆ Click “finish” to complete the installation.

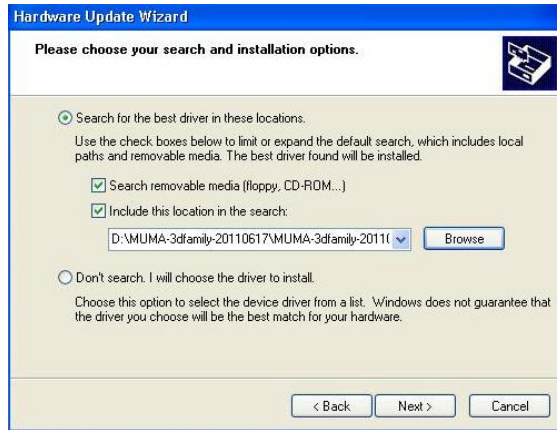


3.3.4 Simple key driver installation

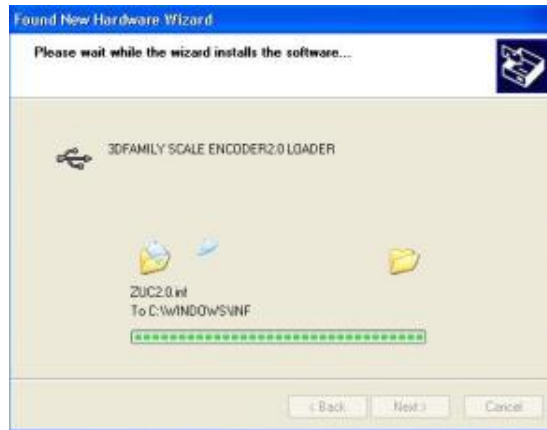
- ◆ A prompt, “Welcome to the Found New Hardware Wizard” will appear, choose “installing the software automatically (Recommended)” and click “next” to continue.



- ◆ Choose "Include this location in the search", click "Browse" to find "simple key" and click "next" to continue.



- ◆ Simple key driver is on process.



- ◆ Click "finish" to complete the installation.



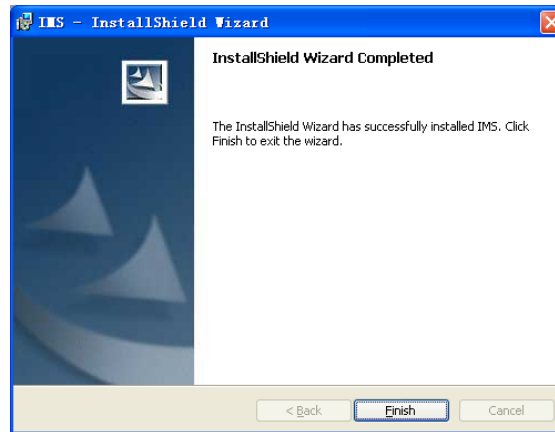
3.4 Software Installing

3.4.1 Installing MUMA Pro software

- ◆ Put the installing disk into the ROM, find and double click “MUMA-Pro.exe” to install.



- ◆ The system will install the software automatically.
- ◆ Click “finish” to complete the installation.



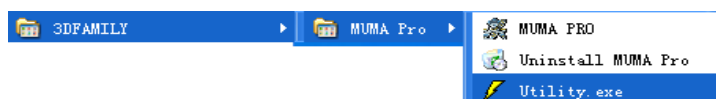
- ◆ When you finish the installation, a shortcut  will be displayed on your screen. Double click the shortcut to run the program; you can also run by following directory:

〔start | Programs | IMS | MUMA | Pro〕

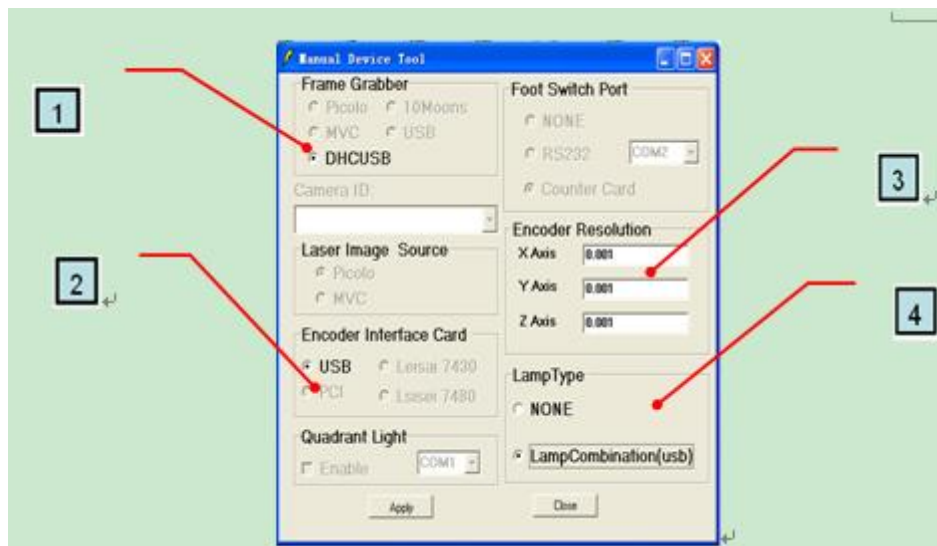


3.4.2 Utility Setting


- ◆ After installation, to configure hardware in Utility. Utility is a small program of hardware configuration which can set image card, counter card, scale ruler resolution and lamp types and so on.
- ◆ Before open the software, test the utility setting. Open the “Utility” in “Start” menu.



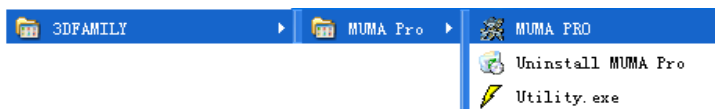
Choose “Manual” , then click “Next” to continue.



- 1: Choose image card "DHCUSB".
- 2: Choose counter card.
- 3: Scale ruler resolution setting.
- 4: Choose lamp type.

◆ After setting, click "Apply". Double click the shortcut  to run the program; you can also run by following directory:

『start | Programs | IMS | MUMA | Pro』



3.4.3 Uninstall the System

◆ Select in turn 『start | Programs | IMS | MUMA | Uninstall』



◆ Choose "Yes" to uninstall the system.



***When you finish all above installation, you can use MUMA200 machine directly.**

4. MUMA200 safety, usage and maintain

For the safety use of MUMA200, please read this chapter carefully.

4.1 Safety notice

- ◆ Do not locate MUMA200 near the place which temperature is too hot, which is not higher than 60 °C, in order not to spoil internal electric circuit.
- ◆ Do not put sharp object in MUMA200 work stage which may will damage the glass.
- ◆ Do not strike or drop MUMA200.
- ◆ Take off power supply if not use MUMA200 for a long time.
- ◆ Do not pour any liquid to MUMA200.
- ◆ Do not disassemble MUMA200 by yourself. For your safety, ask help from professional engineer.
- ◆ If we move MUMA200 during the environment with big difference of temperature and humidity,

there may be having dew on the surface or inside MUMA200. For safety, make sure you have enough time for wet evaporation. Make MUMA200 can be better for room environment before turn on power supply.

- ◆ Make sure there is nothing on power adapter, and power cable do not put anywhere which is possible stumbling or trampled by people.

- ◆ Try to avoid using MUMA200 in follows environment: temperature is lower than 10 °C or higher than 35 °C, humidity is higher than 80%. Because too high temperature will fasten electronics aging and shortens MUMA200 life. And too high humidity will make MUMA200 electric leakage.

4.2 Maintain notice

4.2.1 Machine shell

Something is Polluted on machine, and that will not influence measure accuracy; however pollution may be diffused to guide rail or work stage, which will influence measure accuracy. In case of machine shell is polluted, please clean it gently with softy cloth.

4.2.2 Guide rail

Guide rail is most important for movement, coated maintain oil regularly each three month.

4.2.3 Work stage

When you put on and off workpiece on glass, be careful not damage glass. If there is hydrosphere or oil dew, clean them by cleanser.

4.2.4 Optical scale ruler

All optical scales ruler are covered with dustproof and assembled at place that dust can not easy to arrive. Try to avoid liquid inside. If there is error of encoder, contact to our company.

5. Simple problem solution

This chapter list handling method to some simple problems, we hope this will help you to do some simple solution.

If the following answer can not still help you, please feedback your machine series NO., software version and the details error message or procedure.

5.1 Why cannot open software?

- ◆ Please check connecting of machine and computer.
- ◆ Please check machine power supply is on.
- ◆ Please check connecting of encounter card.
- ◆ Please reinstall encounter card driver.
- ◆ Please refer camera and encounter card driver installation.

5.2 Appear “can not find camera” error

- ◆ Please make sure machine connect to computer correctly. Check CCD driver, if there is no CCD driver in image device; please reinstall the driver referring above driver installation manual.

- ◆ Please make sure camera USB connector is not loose.

5.3 Why there is no image in software?

- ◆ Please check connecting of power supply cable
- ◆ Please check connecting of USB connector.
- ◆ Please check the lamp is on and adjust to proper brightness.

5.4 Why scale ruler cannot readout?

- ◆ Please make sure USB signal wire connect correctly.
- ◆ Please check USB encounter card driver is installing correctly.
- ◆ Please check USB connector is normal.
- ◆ Please check eclectic board is fine.

5.5 Why measure result is different to actual workpiece?

- ◆ Please make sure light is suitable when you are doing calibration. (If light is too strong, measure value will be more. Otherwise, measure value will be less.)

- ◆ Please make sure to do calibration refer to the manual instruction.