

Multifunction Microscope HVC-1000 Series User's Manual

Ver1.0



- The figure, design and specifications of this product can be changed without notice in order to upgrade its quality and performance.
- Please, visit the web site below for technical support(Update Driver/Software/FAQ).

Website <http://www.hyvision.co.kr> / E-mail hyvision@hyvision.co.kr

MADE IN KOREA

<p>HVC-1000 Series Product</p> 	<p>Program CD</p> 	<p>User's Manual</p> 
<p>USB2.0 Cable (1.2Meter)</p> 	<p>MIC Output Cable (1Meter)</p> 	<p>TV Output Cable (3Meter)</p> 
<p>Camera Extension Cable (2Meter) [Possible to use as MIC output extension cable.]</p> 	<p>AC/DC Adaptor [Input : AC100~240V_50/60Hz. Output : DC+12V/1A]</p> 	
 <p style="text-align: center;">TOTAL</p>		

Product Introduction

This product is a portable, high image multifunction microscope using **“SONY Super HAD CCD”**. It is designed for both **“TV & PC (USB2.0) Interface”** in same time and possible **“50~150 Times Magnification(20” Standard)”** by easy lens changing.

It can be used in the dark area with **“Built-in Controllable Bright White LED Light Source”**.

It is also possible to use as a portable security camera and a PC camera with freely various angle control of the body.

This product is applicable in multi-area such as R&D/Education/Field/Production.

Product Application

PCB Surface & Assembly Inspection / Documents / Jewelry / Paints / Small Metal Processing / Small Components / Paper Money / Textiles / Education(Animal/Plant Samples)/ Semiconductor / Identification / etc.

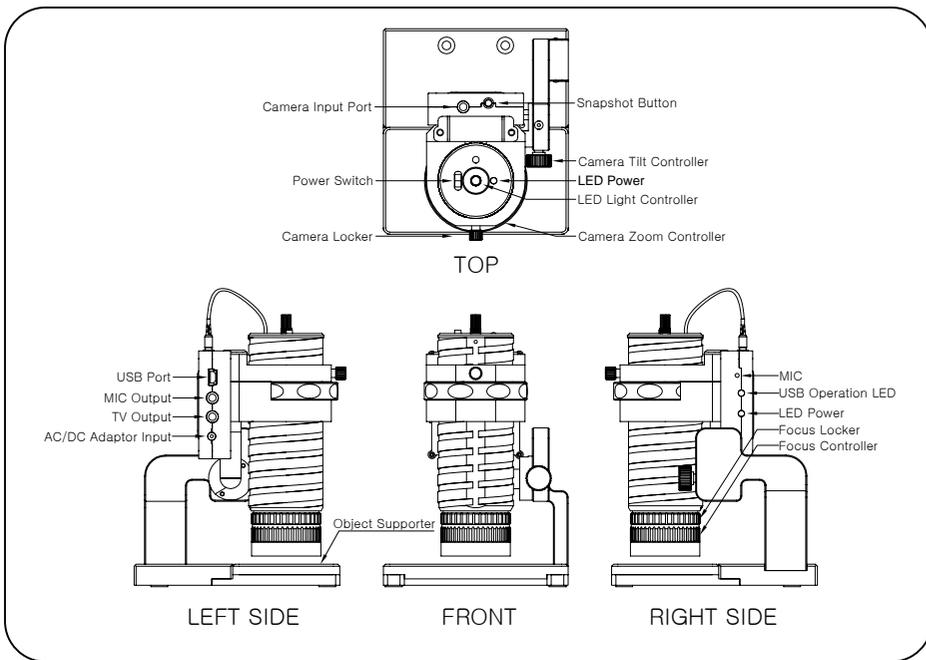
Product Features



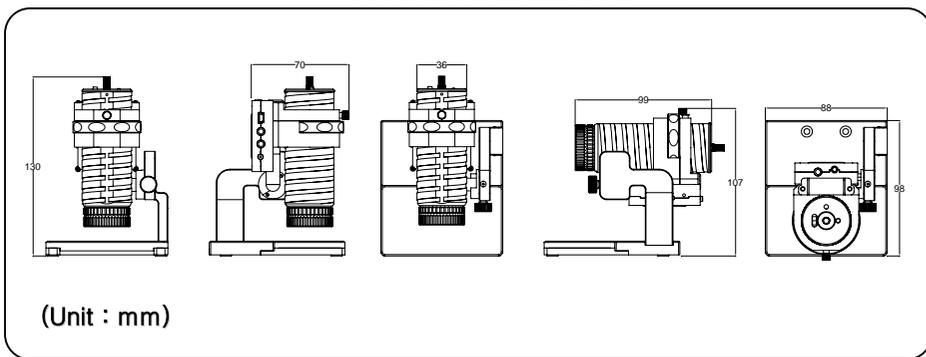
- SONY Interline CCD Image Sensor
- Microscope function and PC Camera function support
- NTSC or PAL TV Composite
- USB2.0 PC Interface
- Snapshot button function
- x50 Zoom ratio support lens (Basic) / Additional Zoom lens (Options)
- White LED light support (Lux control)
- HyVISION Microscope software (For USB)
- DC9~15V Input / USB5V
- Built-In MIC

NTSC	HVC-1000NH/HVC-1000NL
PAL	HVC-1000PH/HVC-1000PL

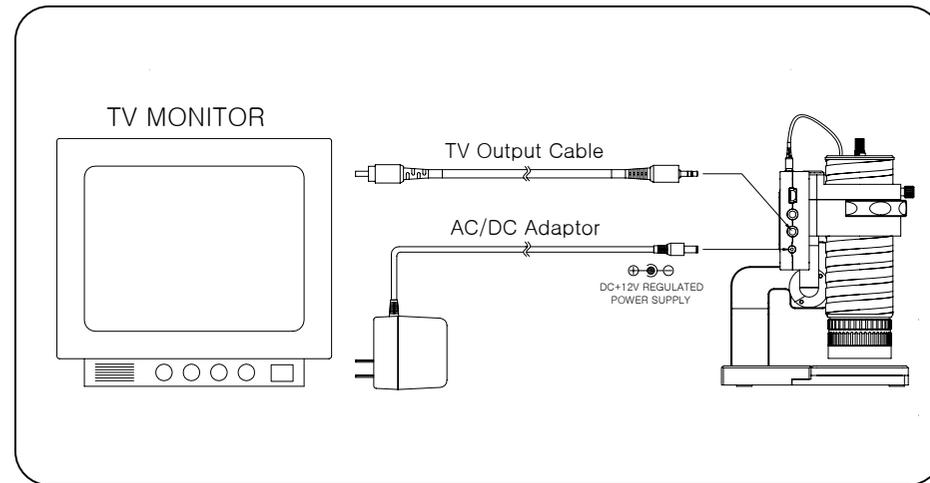
Product Viewing



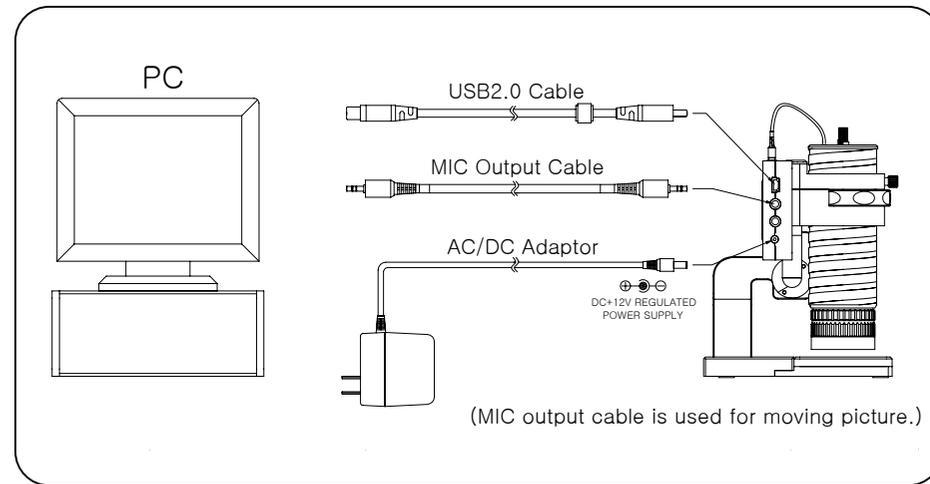
Product Dimension



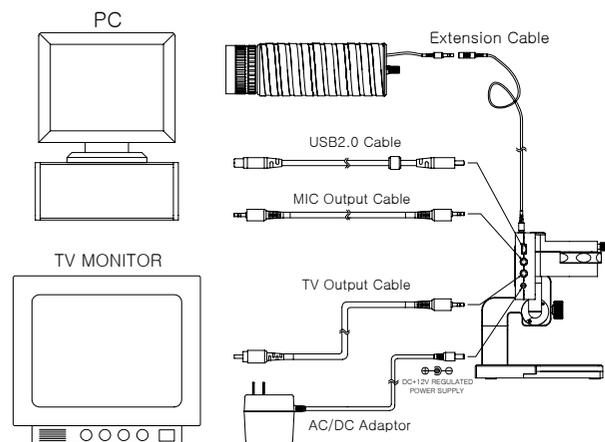
TV Interface



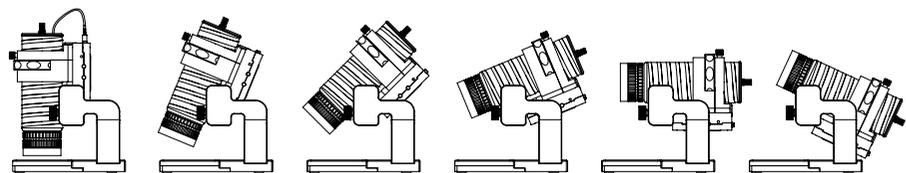
PC Interface



Other Interface (PC & TV in same time, camera separation)

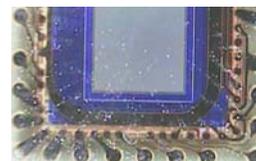
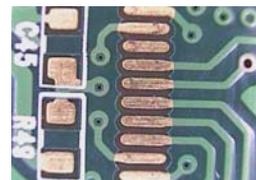


Other Guide



- ▶ Changing camera angle freely from 90° to 25° using the camera tilt controller.
- ▶ Controlling zoom magnification using the camera zoom controller.
- ▶ Fixing the camera using the camera locker after changing zoom and angle.
- ▶ Adjusting focus in the target distance using focus controller.
- ▶ Controlling LED brightness using LED light controller.
- ▶ Only x50 lens can be used for long distance purpose such as PC Camera and Portable CCTV due to the lens operation limit. (x100/x150 lens are for short distance.)
- ▶ Object supporter is stuck by magnet to be easily removed for a certain purpose.

Application Examples



General Magnification Observation

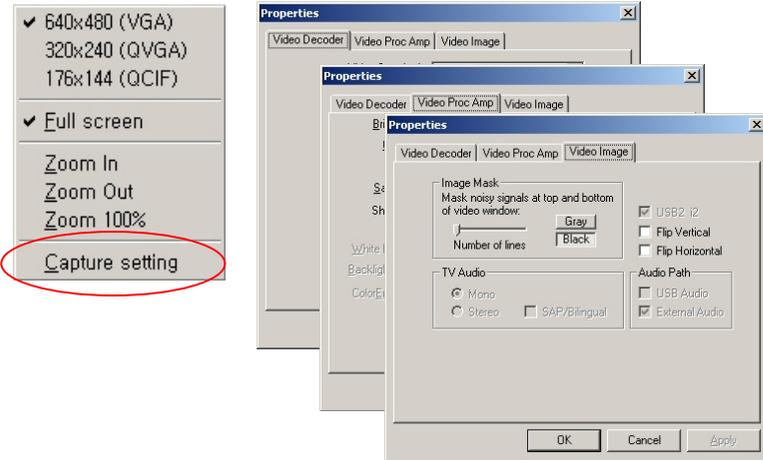
Human Skin / Head Skin

Portable CCTV / PC Camera



Software (HyVISION Microscope Viewer)

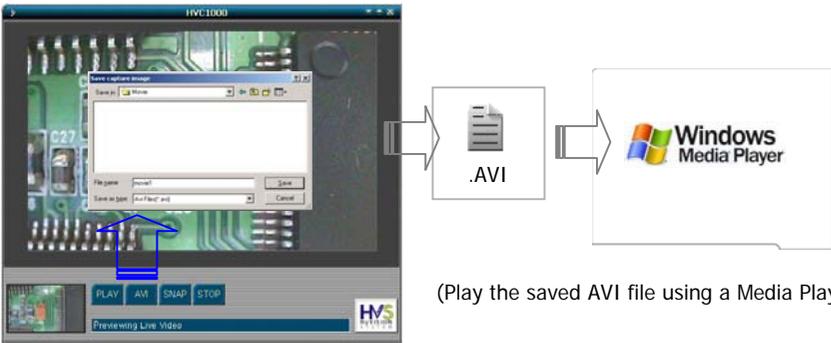
Menu Guide – Capture Setting



Video Decoder/Color Control/Flip functions are possible in Capture Setting as the WDM Standard Setting Function.

(It is enabled only in PLAY/AVI mode.)

Moving Picture - AVI File Save Guide



(Play the saved AVI file using a Media Player.)

Click [AVI] -> Select a folder for saving the file -> Click [Save] and start!
(AVI enables only in STOP mode.)

Software / Other Graphic Tool

Image Tool Usage Guide



You can see the image using [OPEN] function of the commercial graphic SW such as Adobe Photoshop / Paintshop Pro.

You can take a picture by clicking the **Snapshot Button** on the main body.

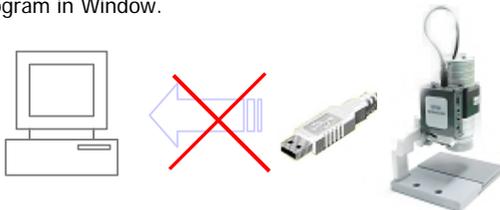
Software Specifications

Item	Description	Note
Operating system	Microsoft Windows 2000 Service Pack 4 Microsoft Windows XP Service Pack 2	
Supported language	Korean and English	
PC requirements	Computer: IBM PC/AT compatible CPU: Intel Pentium III 600Mhz or faster RAM: Minimum 64MB Hard disk space: Minimum 300MB I/O device: USB port, CD-ROM drive	
Image size	640x480(VGA), 320x240(QVGA), 176x144(QCIF)	
Still image capturing	Data saving format : JPG, BMP	
Movie capturing	Data saving format : AVI	

Driver Installation

Installation Procedure - Microsoft Windows 2000

1. For driver installation, it is better to proceed in the state that the camera USB cable is not connecting to PC. It is also recommended to terminate any executing program in Window.



2. At first, insert the Software CD into CD-ROM Driver.
3. Execute [Driver]-[Setup.exe] in the CD-ROM Driver.

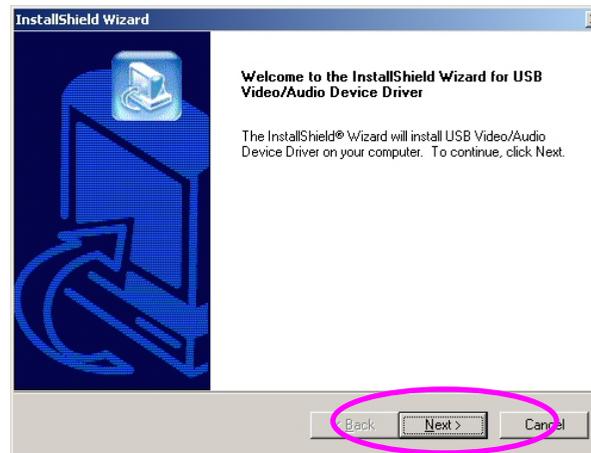
Name	Size	Type
data1	1,277 KB	WinZip File
data1.hdr	60 KB	HDR File
data2	7,105 KB	WinZip File
ikernel	339 KB	EX_File
layout	1 KB	BIN File
Setup	163 KB	Application
Setup	1 KB	Configuration Settings
Setup	135 KB	INX File

4. You will see the proceeding screen as below. Please, wait for completing.

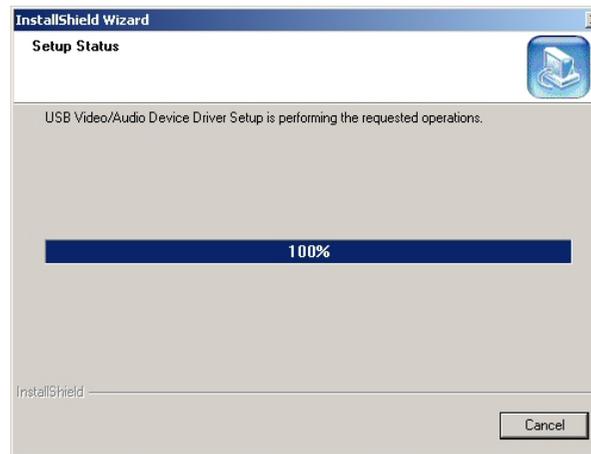


Driver Installation

5. Check [InstallShield Wizard]. Click [NEXT] button.



6. [Install Status] The driver is installing. Please, wait for completing.



Driver Installation

7. [InstallShield Wizard Completion] The driver installation is completed. Click [Finish] button.

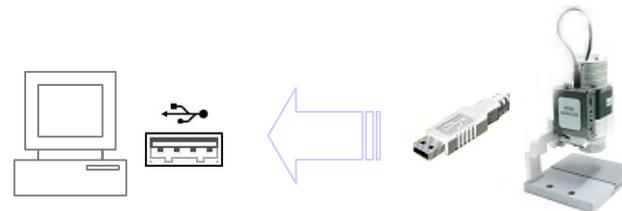


8. After installing the driver, reboot the PC. Terminate all of the executing program, select the choice and click [OK] button.



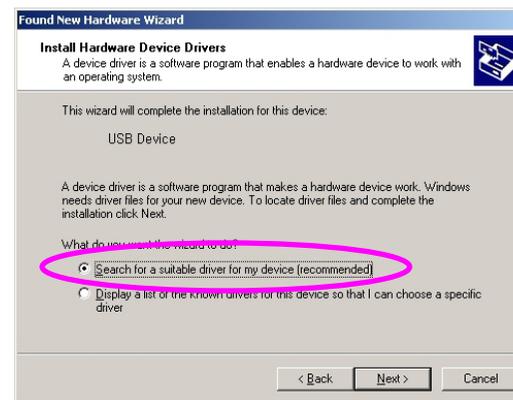
Driver Installation

9. After rebooting, connect the camera to PC as following in order to check the driver and execute the program (Ref. Page 4).



※ Driver installation checking screen can be different depending on user OS(Windows) version. Please, note that other warning messages might be appeared. Just click [OK] button.

- ※ As the screen below is displayed, set and proceed as followings. Select [Software Auto Installation (Recommend)] and click [NEXT] button. Driver auto recognition screen is displayed. The driver installation is completed as [Finish] screen is displayed.



Driver Installation

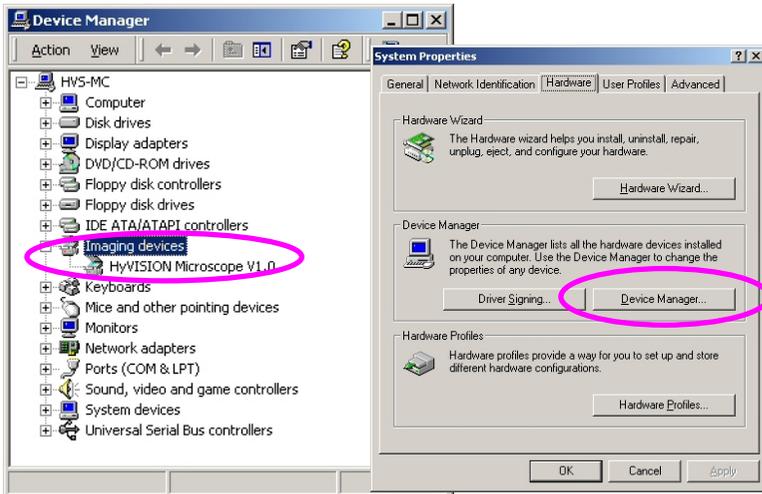
10. To check the driver installation, check [System] as below.

Double-click [Control Panel] – [System].



11. [System Register Information] – [Hardware], click [Device Manager].

Check that [Imaging Device] is displayed as “HyVISION Microscope V1.0”.



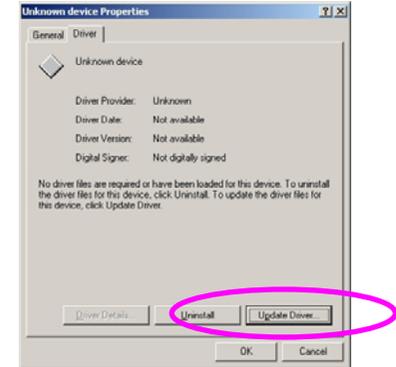
Driver Installation

12. If the driver is installed abnormally as below, check the connection on page 4 again and reinstall the driver as clicking [Driver Update] in register information. Repeat from No. 1 in page 10.

Example 1) HyVISION Microscope V1.0

Example 2) HyVISION Microscope V1.0

Example 3) USB Device

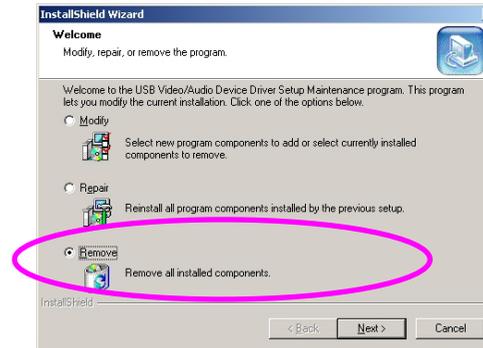


Other devices
[Other Device] “Unknown Device” Display

[Other Device] “Unknown Device” Display

- ① Check the USB port is connecting properly. (Ref. Page 4)
- ② Change the USB port to another location and check. (Ref. Page 4)

13. [Driver Remove] The following screen will be displayed as executing [Driver]-[setup.exe] No. 3 item on Page 10. Select [Remove] and click [Next].



Specification by Models

MODEL	HVC-1000NL	HVC-1000NH	HVC-1000PL	HVC-1000PH
Signal System	NTSC		PAL	
Image Sensor	1/3" SONY Color Super HAD CCD			
Total pixels	537(H) X 505(V)	811(H) X 508(V)	537(H) X 597(V)	795(H) X 596(V)
Effective pixels	510(H) X 492(V)	768(H) X 494(V)	500(H) X 582(V)	752(H) X 582(V)
Scanning	2:1 Interlace			
Sync System	Internal Sync			
TV Video Output	1 [Vp-p] Composite 75Ω unbalanced			
Resolution	380TV Lines	480TV Lines	380TV Lines	480TV Lines
Electronic shutter	1/60-1/100,000(sec)		1/50-1/100,000(sec)	
S/N Ratio	More Than 45dB(AGC OFF)			
Light	Built-in White LED / Lux control			
Sensitivity	1 Lux LED OFF, 0 Lux(3m Range) LED ON			
Gamma	r = 0.45 typ.			
PC interface	USB2.0 Interface support (480Mbps)			
Lens	x50 Manual zoom lens / Optional zoom lens (x100/x150)			
Power supply	DC12V(±10%) Input / USB5V			
Current consumption	Max.250mA(at DC12V) / Max.170mA(at USB5V)			
Operating Temperature	-10°C ~ +50°C			
Dimension	88 x 98 x 130 (WDH, mm)			



Displays for injury or for the loss of hose, property because of wrong usage.

Please, read precautions before using for your safety.



CAUTION

- Avoid place with direct ray of the sun or hot place.
- Avoid moisture, wet or vibrancy place.
- Be careful not to stain particles or fingerprints on the lens. Use soft cloth or cotton stick for cleaning the lens.
- Do not use an organic solvent cleaner such as thinner or benzene for cleaning the camera.
- Do not operate with wet hands to avoid electric shock.
- Do not pull or band cables by force. It may be a cause of image transmission trouble.
- Do not operate the product in dusty place to avoid fire or electric shock.
- Do not drop or impact excessively on the product. It may be a cause of product damage or injury.
- Do not disassemble the product. It may be a cause of trouble.
- Use accessories only included in the product or specified.