

AccuDot

Digital Plate Analyzer

User's Manual

IHARA

Dear customer:

Congratulations! You have just purchased one of the finest instruments available. We appreciate the opportunity to serve you and we hope that you will be thoroughly satisfied with this product.

We at Ihara have a long history of engineering products to perform to exacting standards – standards based on our commitment to meeting and exceeding customer needs. A key component of this commitment is Ihara's strong and continuing research and development initiatives – initiatives designed to meet the changing needs of our customers well into the future.

Thank you again for selecting one of our quality products.

Sincerely,

Masayuki Itoh
President
Ihara Electronic Industries Co., Ltd.

OWNER'S RECORD

Model No. _____

Serial No. _____

Date of Purchase _____

Place of Purchase _____

Invoice No. _____

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GETTING STARTED

- ☐ PACKING LIST
- ☐ FEATURES
- ☐ PRECAUTIONS
- ☐ POWER ON
- ☐ CHARGING BATTERY

PACKING LIST

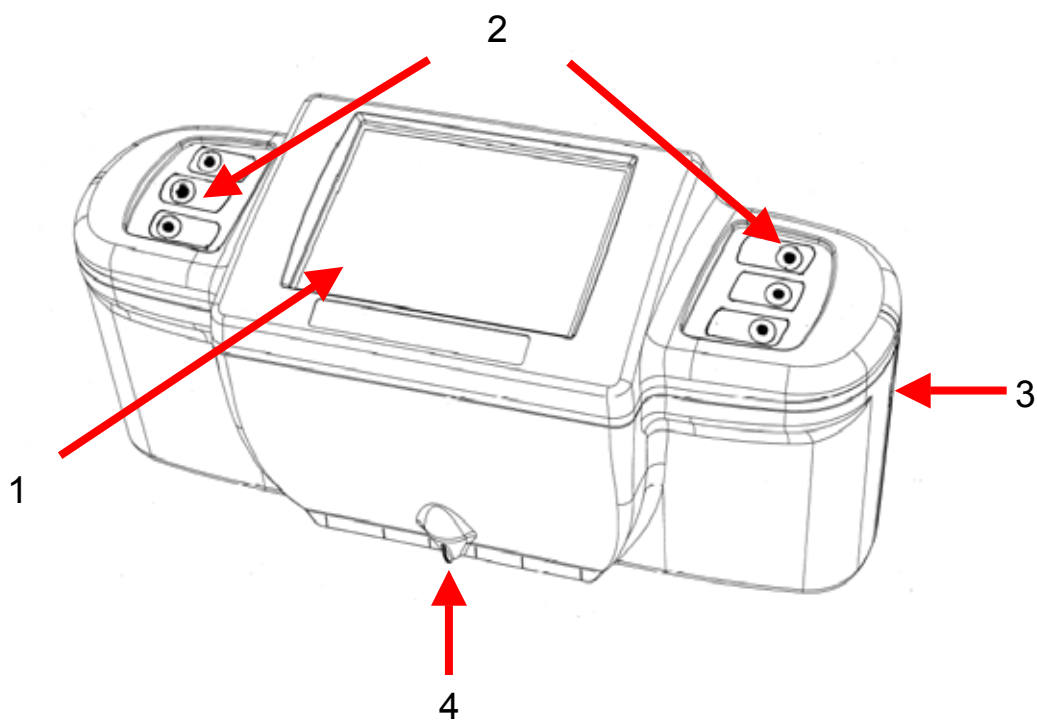
Before operating this instrument, please inspect for damage and check the packing list below to ensure that all parts are included in this package.

If there is a sign of damage due to shipping, please contact the shipper immediately.

Item#	Part No.	Description	Quantity
1		AccuDot	1
2		AC Adapter	1
3		Carrying Case	1
4		CD-ROM (Including User's Manual)	1
5		USB Mini-B Cable	1
6		Warranty Statement	1
7		Warranty Registration Card	1

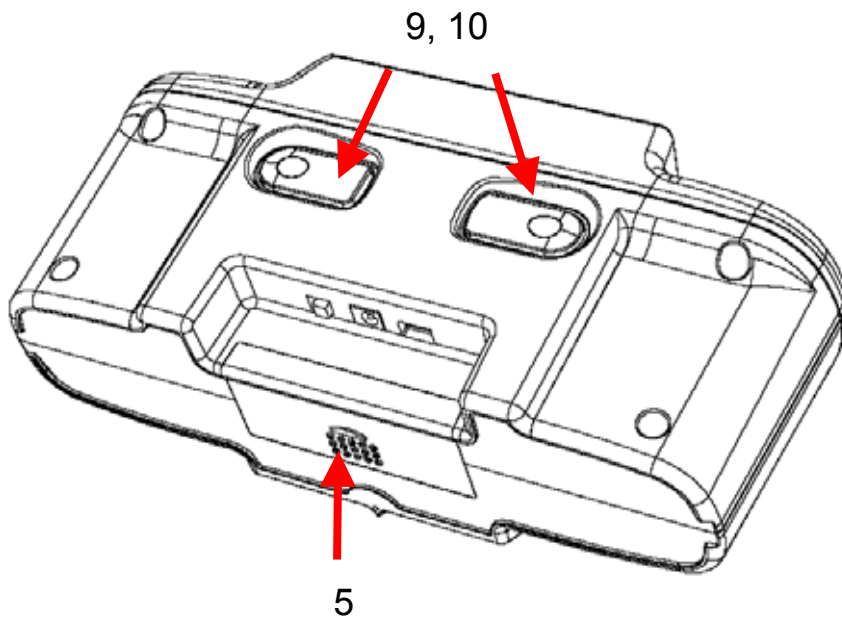
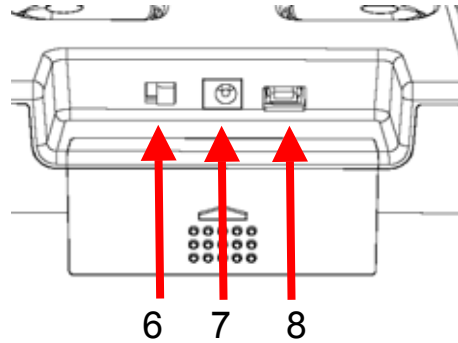
FEATURES

1. Large Color LCD display
2. Function Keys
3. Cable Harness Attachment
4. Measurement Target



FEATURES

- 5. Battery Cover
- 6. On/Off Switch
- 7. AC Adapter Receptacle
- 8. USB Port
- 9. 10. Measurement & Exit Key



PRECAUTIONS

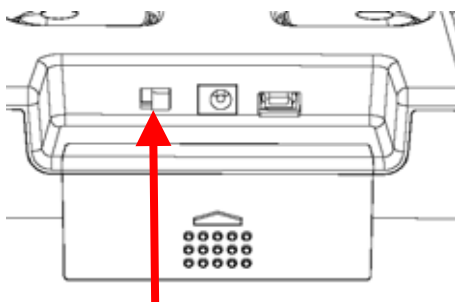
Every AccuDot is manufactured with the highest quality of workmanship. To assure long-lasting operation with this instrument, please read the following information carefully.

- Before operating this instrument for the first time, charge the instrument for approximately 2 hours. The unit is operable while it is charging.
- Avoid operating and storing in an area where the instrument may be exposed to direct sunlight, high humidity or extreme temperatures.
- Examine periodically for dust or dirt in the optical area. If cleaning is necessary, please contact Ihara or a local dealer for further assistance.
- Do not use and store in atmospheres that contain combustible gas.
- **Use only the AC adapter that came with the instrument.** All others may result in damage to the instrument.
- Avoid contacting the LCD surface with a sharp or pointed object.
- Clean the LCD with a soft, clean cloth without water or cleaning agent. If possible, use a special glass or lens cleaning tissue.
- Dropping or misuse of this instrument may cause serious damage.

POWER ON

POWER ON

1. Slide the on/off switch to the “ON” position.



2. Depress the measurement keys or function keys.
3. The LCD screen is lit after approximately 4 seconds.

POWER OFF

The auto-off timer can be preset to turn the power off at 40 seconds, 90 seconds, 210 seconds or “Disabled.” The unit will shut off only with the ON/OFF switch when the “Disabled” function is selected.

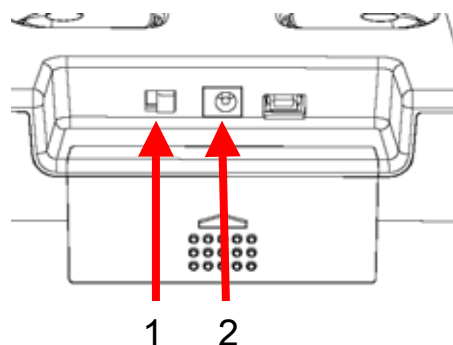
The instrument will not power off automatically when it is connected to a PC.

CHARGING BATTERY

Every AccuDot is equipped with a built-in charging system. Please give special attention to the following details. Incorrect procedure may permanently damage this instrument.

Charging Sequence

1. Make sure the unit is turned off prior to connecting to the AC adapter.
2. Insert the AC adapter plug into the receptacle in the back of the unit (2).
3. Plug the AC adapter into an electric outlet. Full charge should take approximately 2 hours.
4. The battery indicator blinks when the instrument is charging.



Make sure the “on-off” switch is on the off position when the unit is not being used for a long period of time.

CHARGING BATTERY

NOTE:

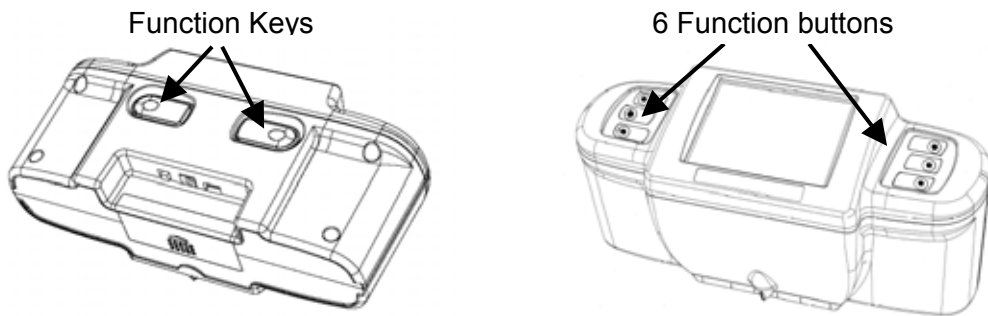
- **Use the AC adapter that came with the instrument;** all others may result in damage to the instrument.
- It takes approximately 2 hours to fully charge the unit.

GENERAL OPERATION

- ☐ FUNCTION KEYS
- ☐ SYSTEM SETUP
- ☐ HOW TO TAKE A MEASUREMENT
- ☐ PLATE SETUP PROCEDURES

FUNCTION KEYS

There are two function keys in the rear of the instrument and 6 function buttons on the top of the instrument.



When you select right-handed at the LEFT/RIGHT VIEW in the system setup menu, the function key to the right in the rear of the instrument is used as the MEASUREMENT key and the key to the left is used as the EXIT key.

When you select left-handed, the functions on these keys are vice versa.

MEASUREMENT Key

Press the MEASUREMENT key to take a measurement.

Press the MEASUREMENT key once again will return the LCD display to live view.

EXIT Key

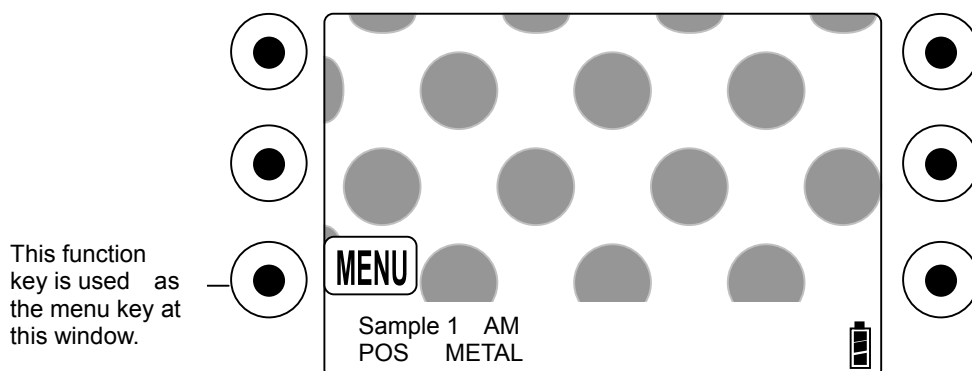
Press the EXIT key to return the LCD display to the previous screen.

The EXIT key is also used to cancel the instruction message.

The EXIT key (hold the key for 2 seconds) opens the Help Menu offering explanations and procedures for each measurement function and setup option.

FUNCTION KEYS

The six function buttons are indicated next to each key on the LCD display.



Menu

Press the MENU key to open the Function Menu to begin selection.

Enter

Selects highlighted item.



Scrolls up / Scrolls down



Scrolls Right / Scrolls Left

B/W

Black & White Image is displayed.

Color

Color image is displayed.

Prev

Return to the previous image & value.

FUNCTION KEYS

Edit

Opens the edit menu to change the plate name at the plate setup menu and the template name at dot analysis menu.

Save

Saves the plate name and template name.

Meas

Start plate setup measurement.

Cancel

Cancels the firmware update

FUNCTION KEYS

Advance Version Only

Measurement Mode

LPI

Opens the Screen Ruling function.

Angle

Opens the Screen Angle function.

Size

Opens the Dot Size function.

Dot Analysis Mode

Graph

Displays the graph of screen steps.

Gain

Displays the dot gain curve in graphical format.

Value

Displays the reference and dot % readings of each step.

Retry

Repeat the measurement.

Input

Input the values.

Insert

Inserts the value into the screen step template.

Delete

Deletes the value selected in the screen step template.

Sort

Sorts the input data in the screen step template.

Clear

Clear the input data in the screen step template.

MEASUREMENT MODES

- MEASUREMENTS

Measure the dot area on plate or paper.

- ZOOM

Zoom in to view the image in full, 1x and 2x.

- COLOR or B/W

The captured image is change to the B/W image.

The Advance Version Only

- LPI (Distance)

Calculates the screen ruling and the distance.

- ANGLE (Screen Angle)

Calculates the screen angle.

- SIZE (Dot Size)

Measures the dot size.

- DOT ANALYSIS

This measurement allows the operator to measure and to plot the dot curve (dot gain curve).

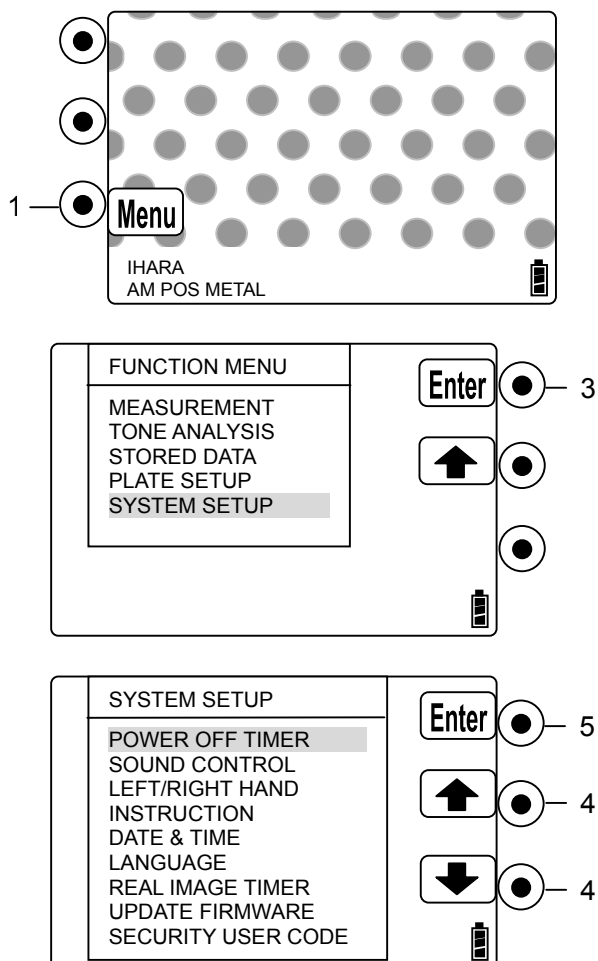
- STORED DATA

200 measurement data with their individual date & time is stored.

SYSTEM SETUP

The system setup menu allows the user to customize certain operation functions and the LCD display.

1. Press the **Menu** key to open the FUNCTION MENU.
2. Press the **↓** key to scroll to SYSTEM SETUP.
3. Press the **Enter** key to select SYSTEM SETUP.
4. Press the appropriate arrow key to scroll to the item you want to configure.
5. Press the **Enter** key to make the selection.
6. After completing the setup functions, press the measurement key at the rear of the instrument to go back to the Function Menu.



SYSTEM SETUP

You may customize the following system setup parameters:

POWER OFF TIMER

The auto-off timer can be preset to turn the power off at 40 seconds, 90 seconds, 210 seconds or “Disabled.” The unit will shut off only with the ON/OFF switch when the “Disabled” function is selected.

SOUND CONTROL

The user may turn the “beep” sound on or off.

LEFT/RIGHT HAND

The user may adjust the key direction of the instrument depending on whether the user is right-handed or left-handed.

INSTRUCTIONS

The user may turn on the instruction feature, which enables instructions to appear for the next measurement function. Press the EXIT key to close the instruction box.

DATE & TIME

The date and time can be preset before using. The date and time are stored with the measuring data.

SYSTEM SETUP

LANGUAGE

The user has the option to set the language version of the instrument to English or Japanese.

REAL IMAGE TIMER

The LCD off timer can be preset to turn the LCD off at any seconds to conserve the battery power.

UPDATE FIRMWARE

The user can update or upgrade via the Internet. There will be a nominal charge to upgrade the firmware.

Please see page 65 for this procedure.

SYSTEM SETUP

SECURITY USER CODE

The security function safeguards your investment. The AccuDot will operate only with the correct user code.

How to setup the security user code:

1. Select the No. of Measurement and press key.
 2. Press the appropriate arrow keys to input the number. After you take measurements of the number, the security function works.
 3. Press key to confirm the number.
 4. Press the down arrow key to select the security code.
 5. Press key to open the security user code menu.
 6. Press the arrow key to enter the number you want.
 7. Press the key to confirm the security user code.
- DON'T forget the security user code you selected.**
8. Press the key or key to the Security Function.
 9. Press key to select the Security Function.
 10. Press the arrow key to ON and press key.
 11. The security user code setup is complete.

Open the Version Information at the System Menu to view number of measurements remaining before the security user code is required.

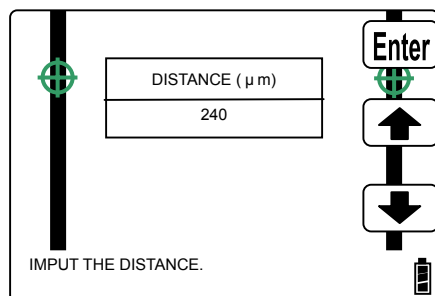
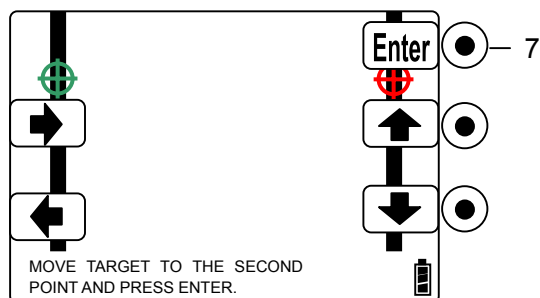
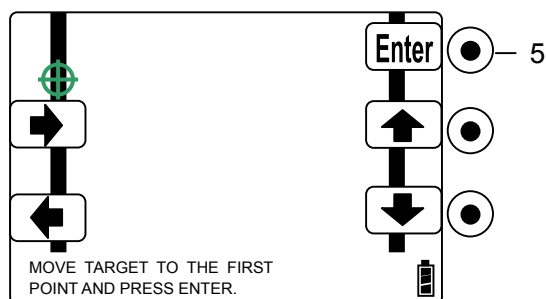
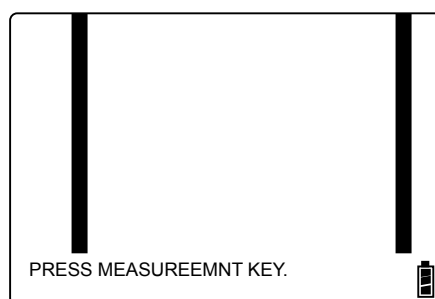
SYSTEM SETUP

TOOL CALIBRATE

To calibrate the measurement tool, take a measurement reading with an appropriate and accurate scale.

How to take the tool calibration:

1. Select TOOL CALIBRATE in the SYSTEM SETUP menu.
 2. Take measurement of an accurate scale.
 3. A green target is displayed.
 4. Move the green target to the first point.
 5. Press **Enter** key and a red target is displayed.
 6. Move the red target to the second point.
 7. Press **Enter** key.
 8. Input the distance of the scale you used.
7. Tool calibration is finished.



SYSTEM SETUP

UNITS (cm/inch)

Select the “cm” or “Inch” to display the screen ruling.

VERSION INFORMATION

Indicates the following information about the current unit:

SYSTEM SETUP	
VERSION INFORMATION	
ACCUDOT	
MODEL	ADVANCED
SERIAL NO.	709998
FIRMWARE VER.	1.10
PRODUCT NO.	000001
MEASUREEMNT NO.	2
NO. OF SECURITY	0

Model

Serial No.

Firmware Version No.

Product No.

Measurement No.

The number of measurements has been made.

Number of Security

The remaining measurement number before the security function works.

PLATE SETUP PROCEDURE

Before taking a measurement, the plate setup has to be made for each type of plate or paper you use. This information is stored and can be retrieved in the future when using the same type of plate or paper.

0%, approximately 50% and 100% patches are needed for the plate setup.

To enter plate setup mode:

1. Press the **Menu** key to open the FUNCTION MENU.
2. Press the **↑** key to highlight the PLATE SETUP.
3. Press the **Enter** key to select the PLATE SETUP.
4. Press the **↑** key to highlight the SETUP DATA and press **Enter**.
5. Press the **↑** key or **↓** key to highlight the plate name to use.
6. Press the **Enter** key to select the plate name.

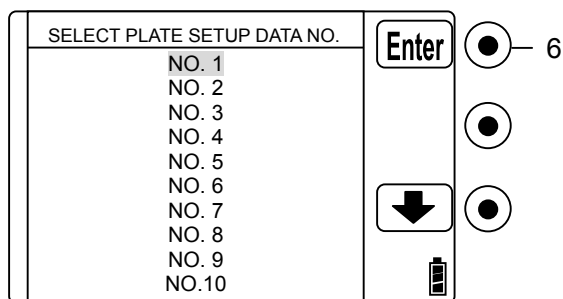
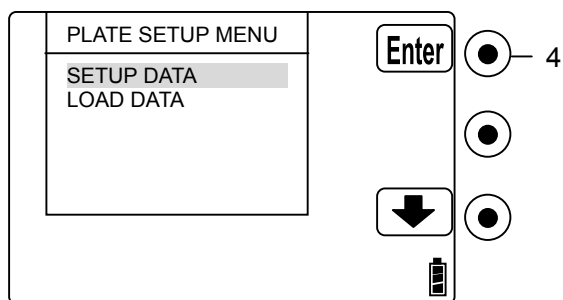
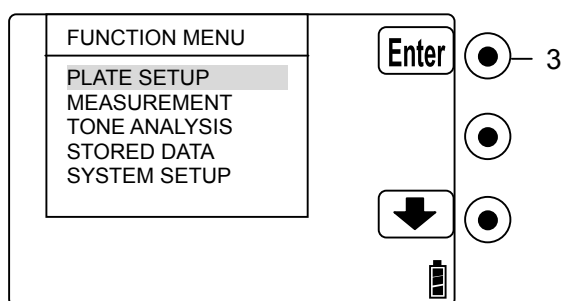


PLATE SETUP PROCEDURE

How to make the plate setup parameters;

1. Press the appropriate arrow key to scroll to the parameter you want to change.
2. Press **Edit** key to select the parameter.
3. After editing all parameter, press **Meas** key.
4. Place the target at around 50% area and press the Measurement key.
5. Place the target at 0% area and press the Measurement key.
6. Place a target at 100% area and press the Measurement key.
7. "Plate Setup is completed" is displayed.

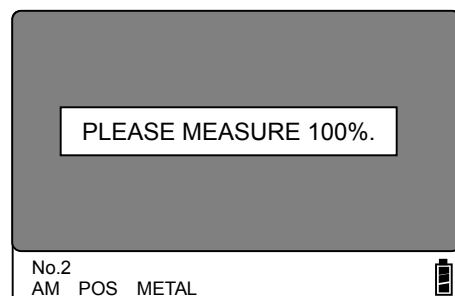
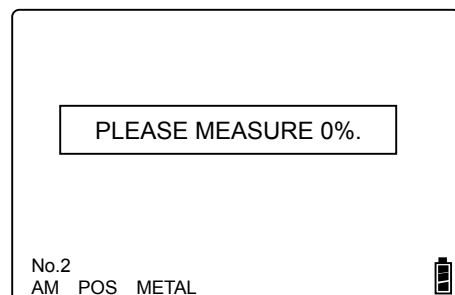
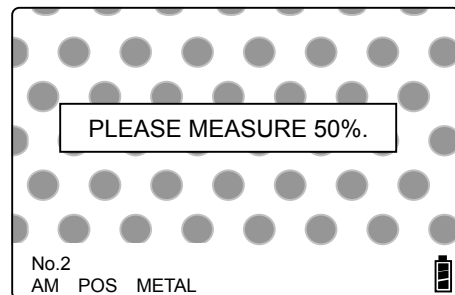
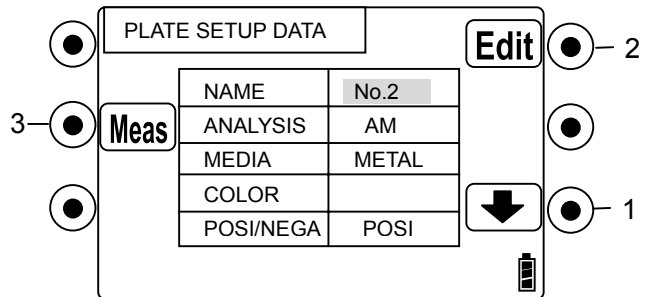


PLATE SETUP PROCEDURE

The following explains the plate setup parameters.

NAME

Steps to rename the samples:

1. Press the **Edit** key when the sample name is highlighted.
2. Press the **→** key to highlight the character to edit.
3. Press the **Edit** key and the character starts blinking.
4. Press the appropriate arrow key to scroll to the alphabet, number, space and special characters for renaming.
5. Press the **Enter** key to select the character.
6. Press the **→** key to move to the next character.

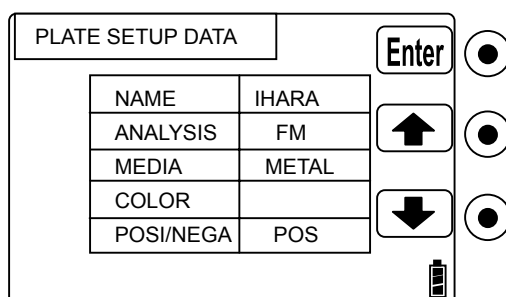
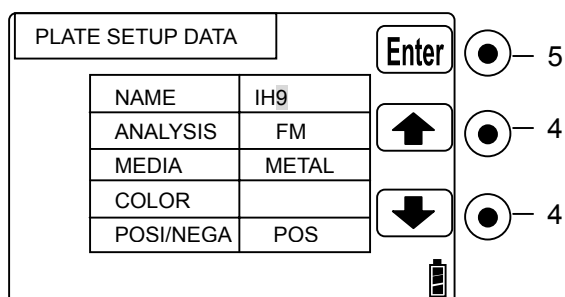
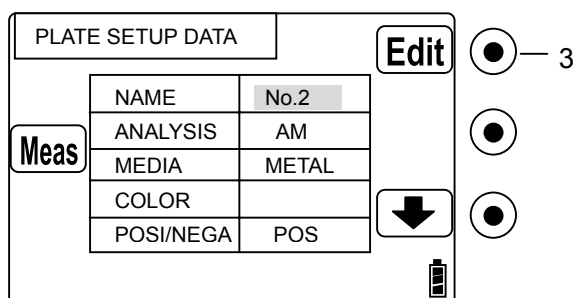


PLATE SETUP PROCEDURE

7. Repeat steps 3 to 5.
8. After editing all characters, press the **Save** key to save the sample name.

The screenshot shows the 'PLATE SETUP DATA' screen. It features a table with the following data:

NAME	IHARA
ANALYSIS	FM
MEDIA	METAL
COLOR	
POSI/NEGA	POS

Navigation buttons include a right arrow on the left, a left arrow on the right, and 'Edit' and 'Save' buttons on the right side. The 'Save' button is highlighted with a red box. A battery icon is at the bottom right. Callout circles are numbered 8, 1, and 2.

How to setup the plate setup parameters;

1. Press the appropriate arrow key to scroll to the item you want to edit.
2. Press the **Edit** key and the item blinks.
3. Press the arrow key to scroll to the items you want to use.
4. Press the **Enter** key to select the item.

The screenshot shows the 'PLATE SETUP DATA' screen. It features a table with the following data:

NAME	IHARA
ANALYSIS	FM
MEDIA	METAL
COLOR	
POSI/NEGA	POS

Navigation buttons include a 'Meas' button on the left, and 'Edit', up arrow, and down arrow buttons on the right side. The 'Edit' button is highlighted with a red box. A battery icon is at the bottom right. Callout circles are numbered 2, 1, and 1.

The screenshot shows the 'PLATE SETUP DATA' screen. It features a table with the following data:

NAME	IHARA
ANALYSIS	FM
MEDIA	METAL
COLOR	
POSI/NEGA	POS

Navigation buttons include a 'Meas' button on the left, and 'Enter', up arrow, and down arrow buttons on the right side. The 'Enter' button is highlighted with a red box. A battery icon is at the bottom right. Callout circles are numbered 4, 1, and 1.

Once the plate setup is completed, the parameters are stored.

PLATE SETUP PROCEDURE

SCREEN

Select the screen type for the plate material or paper, i.e., AM or FM. Select AM if using XM screening.

MEDIA

Select the measurement media,

- Metal Plate (high contrast plate)

- Metal Plate 2 (low contrast plate)

- Waterless Plate

- Polyester Plate

- Paper (Printed Material)

- Pro-T (Processless Plate)

COLOR

Select CMYK color when you select PAPER as the measurement media.

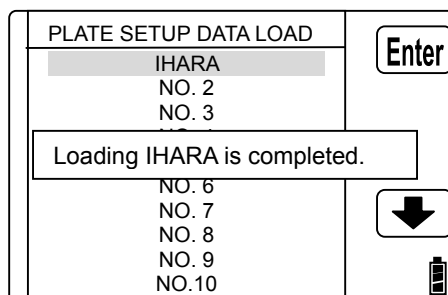
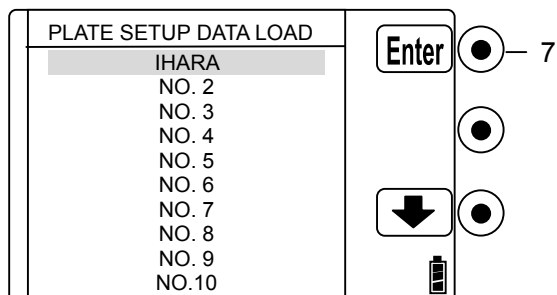
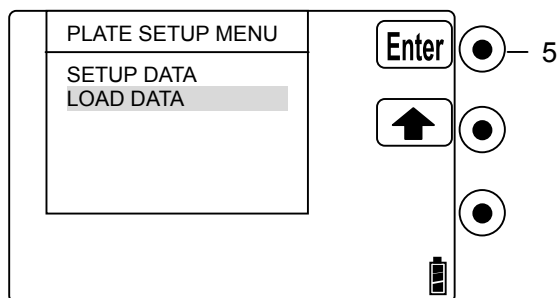
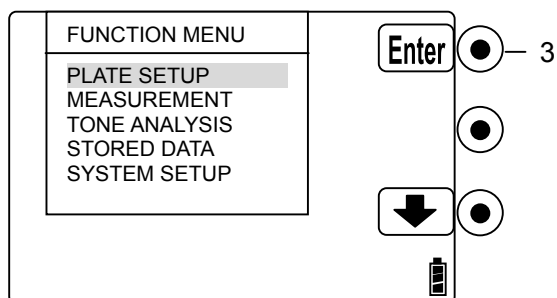
POS / NEG

Select the POSITIVE or NEGATIVE type.

PLATE SETUP PROCEDURE

Steps to load the plate setup data

1. Press the **Menu** key to open the FUNCTION MENU.
2. Press the **↑** key to highlight the PLATE SETUP.
3. Press the **Enter** key to select the PLATE SETUP.
4. Press the **↓** key to highlight the LOAD DATA.
5. Press the **Enter** key to select the LOAD DATA.
6. Press the appropriate arrow key to scroll to the plate name you want to select.
7. Press the **Enter** key to load the plate setup data.



HOW TO TAKE A MEASUREMENT

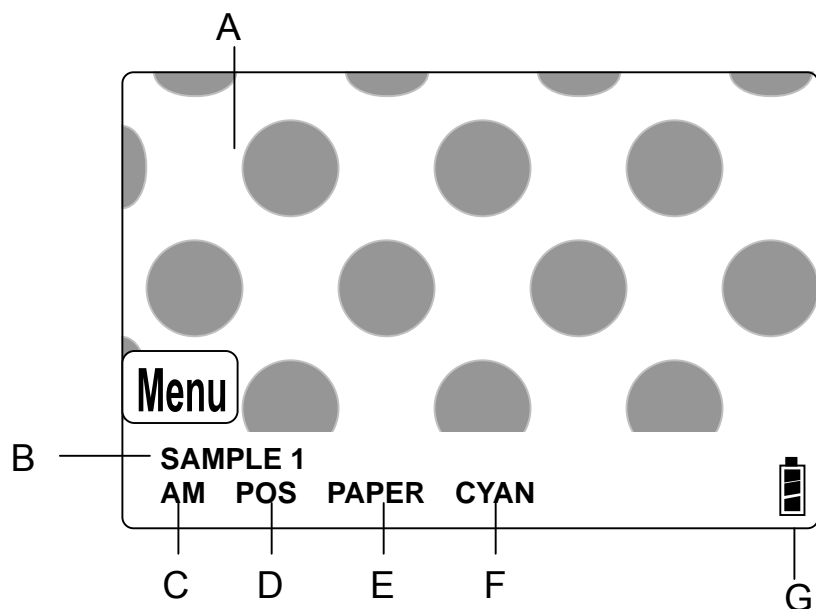
Steps to take a measurement:

1. Slide the power switch in the rear of the instrument to the ON position.
2. Press any function keys to display the screen.
3. Press the **Menu** key to open the FUNCTION MENU.
4. Scroll down to highlight a Measurement function.
5. Press the **Enter** key to select the function.
6. Place the measurement target on the area you wish to measure.
7. Press the Measurement key.
8. Measurement reading and the captured images are displayed on the LCD.

MEASUREMENT FUNCTIONS

- ☐ MEASUREMENTS
- ☐ SCREEN RULING / DISTANCE (Advance only)
- ☐ SCREEN ANGLE (Advance only)
- ☐ DOT SIZE (Advance only)
- ☐ ZOOM (Advance only)
- ☐ CHANGE DOT VIEW
- ☐ BACK TO PREVIOUS IMAGE
- ☐ DOT ANALYSIS (Advance only)
- ☐ STORED DATA (Advance only)
- ☐ EXPORT IMAGE (Advance only)
- ☐ EXPORT DATA (Advance only)

MEASUREMENTS



A Real Image

B Sample Name (named at the Plate Setup menu.)

C AM or FM

D Positive (POS) or Negative (NEG)

E Metal, Metal 2, Waterless, Polyester Plate, Paper or Pro-T

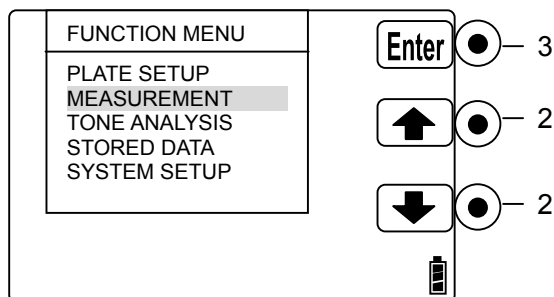
F Color Indicator (Paper only)
Cyan, Magenta, Yellow, Black

G Battery Indicator

MEASUREMENTS

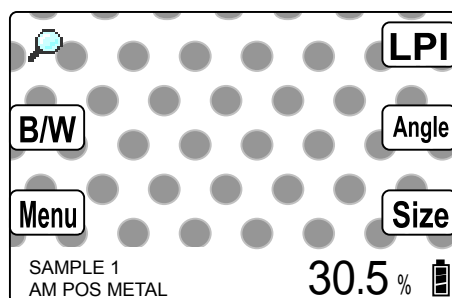
To enter measurement mode:

1. Press the **Menu** key to open the FUNCTION MENU.
2. Press the appropriate arrow key to highlight the MEASUREMENT function.
3. Press **Enter** key to select the MEASUREMENT.



Measurement step:

1. Locate the target via the LCD display in real time.
2. Press the measurement key at the rear of the instrument.
3. Measurement reading and captured image are displayed.



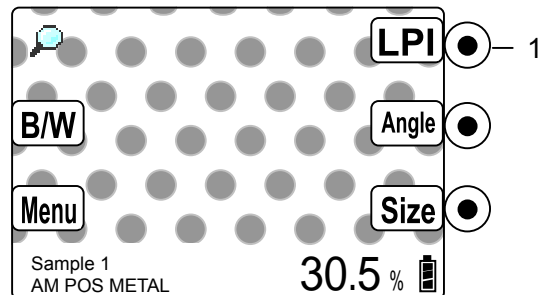
Some function keys are displayed on the screen for screen analysis.

To take the next measurement, press the keys at the rear of the instrument to enable real time image display.

SCREEN RULING / DISTANCE (Advance Only)

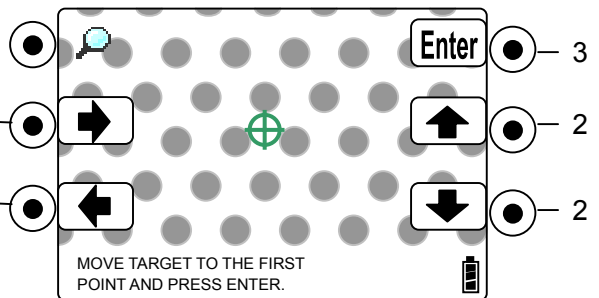
To open the **SCREEN RULING (Distance)** mode:

1. Press the **LPI** key to enable the screen ruling (distance) mode.



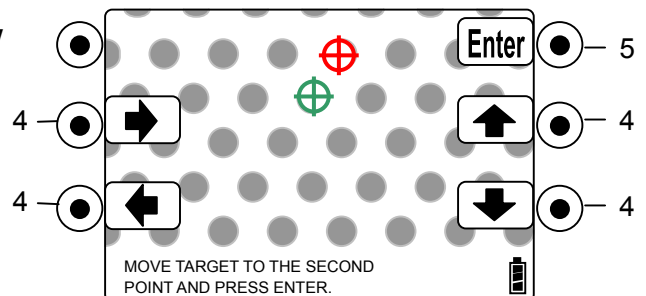
2. Press the appropriate arrow key to move the green pointer to the first position.

3. Press the **Enter** key to lock the pointer position and the red pointer is displayed.

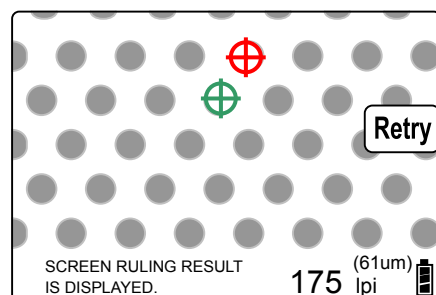


4. Press appropriate arrow key to move the red pointer to the second position.

5. Press the **Enter** key to lock the red pointer position.



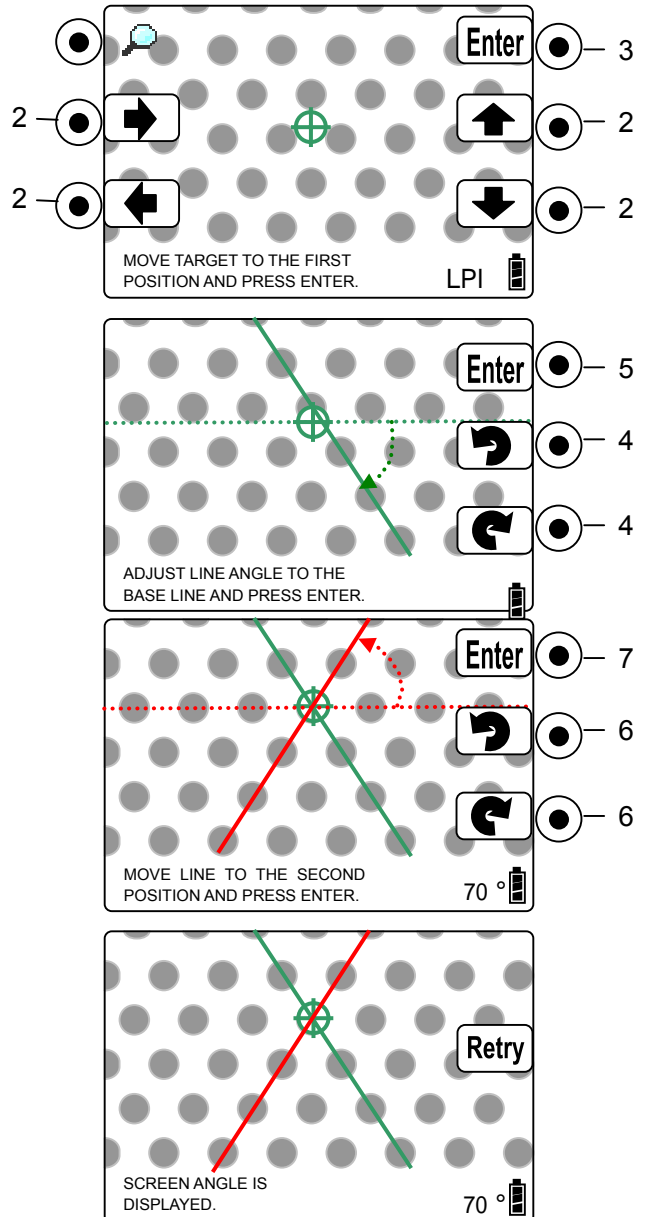
6. Screen Ruling measuring result and the distance are displayed under the captured image.



SCREEN ANGLE (Advance Only)

To open the screen angle mode:

1. Press the **Angle** key to enable the screen angle mode.
2. Press the appropriate arrow key to move the green pointer to the dot on the base line.
3. Press the **Enter** key to lock the pointer position on the dot.
4. Press the **↶** key or the **↷** key to adjust the base line angle.
5. Press the **Enter** key to fix the base line and the red line is displayed.
6. Press the **↶** key or the **↷** key to adjust the red line angle to the desire position.
7. Press the **Enter** key to lock the red line position.



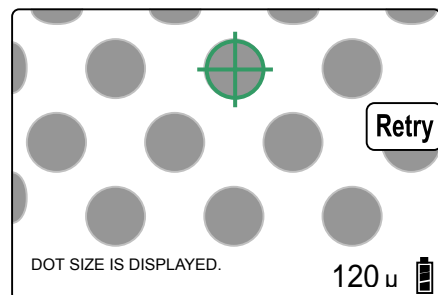
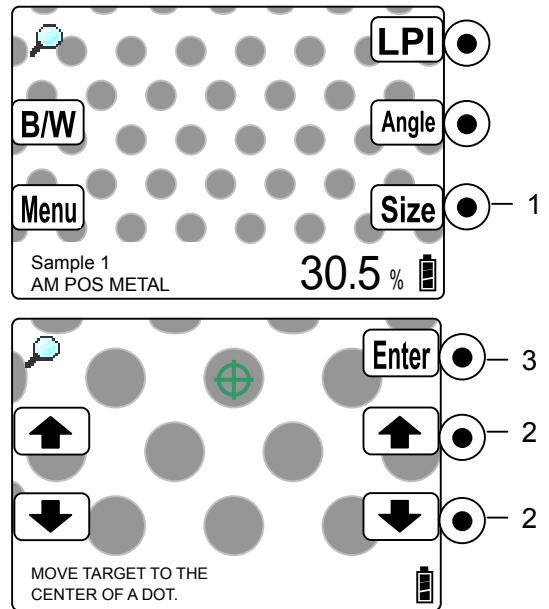
Screen Angle is displayed.

DOT SIZE (Advance Only)

To open the dot size mode:



1. Press the **Size** key to enable the dot size mode.
2. Press the appropriate arrow key to move the green pointer to the center of the dot.
3. Press the **Enter** key to lock the pointer position.
4. Press the **↑** key or **↓** key to change the circumference of the green pointer to match the circumference of the dot.
5. Press the **Enter** key.

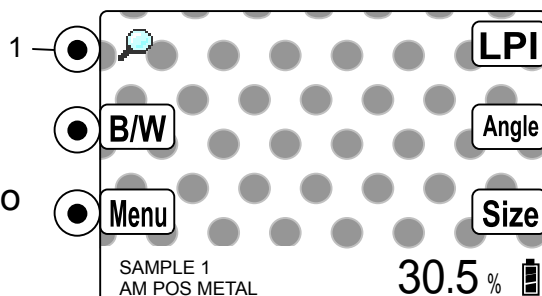
Dot size is displayed.



ZOOM (Advance Only)

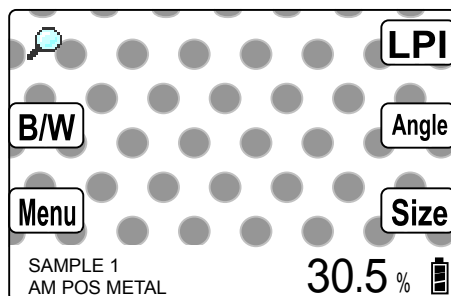
To zoom in on the display:

1. Press the  key.
2. The captured image is shown at Full image.
Press the  key again to view in 1X or 2X.



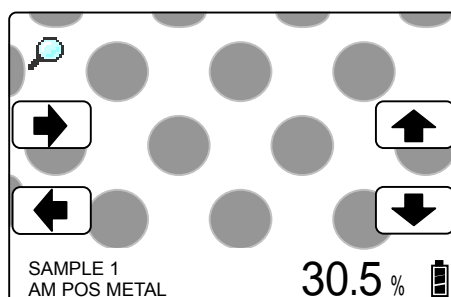
FULL: Full image captured

Equivalent to approximately 90 times magnification.



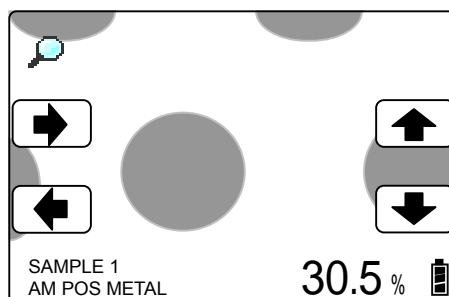
1x: Displayed image when you take measurements.

Equivalent to approximately 180 times magnification.



2x: 2 times of the displayed image.

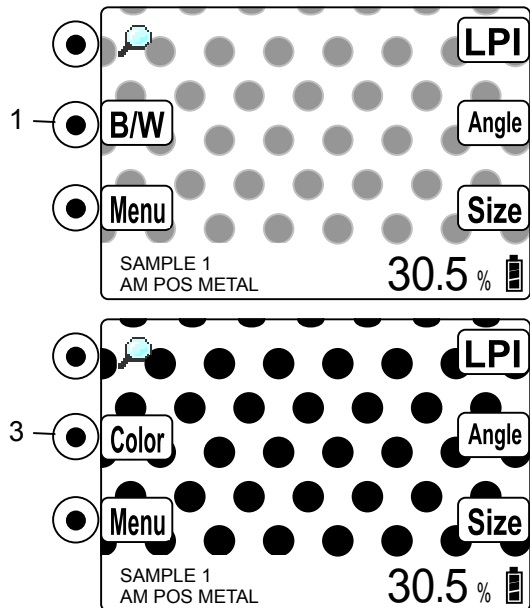
Equivalent to approximately 360 times magnification.



CHANGE DOT VIEW

To change the dot view:

1. Press the **B/W** key to change the view from color image to a black & white image.
2. The black & white image is displayed.
3. Press the **Color** key to change the display back to color.

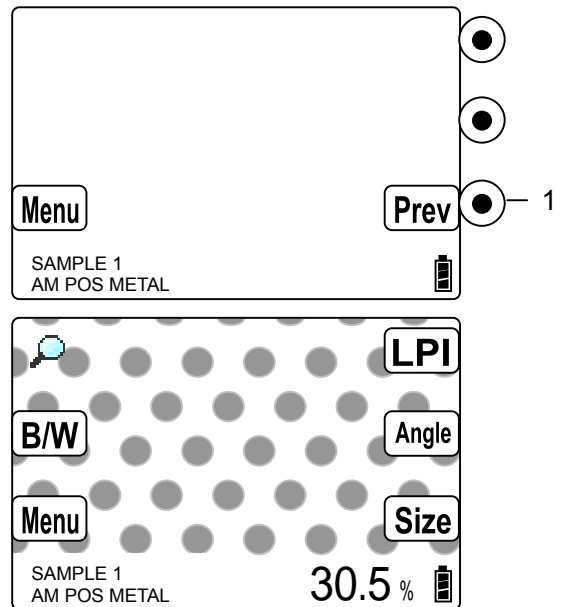


BACK TO PREVIOUS IMAGE

Once a measurement is made, the **Prev** key is displayed at the live camera image display.

Back to the previous image:

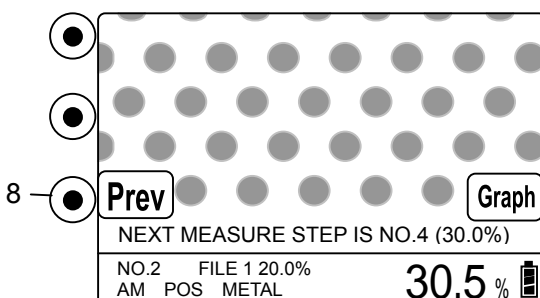
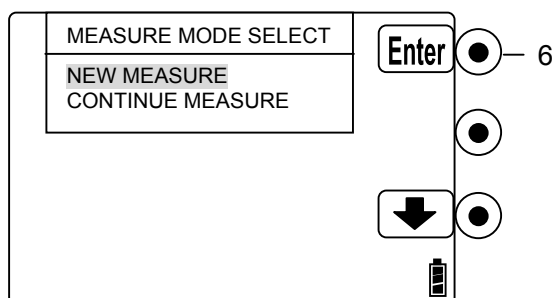
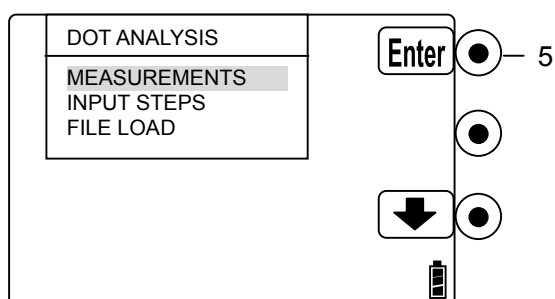
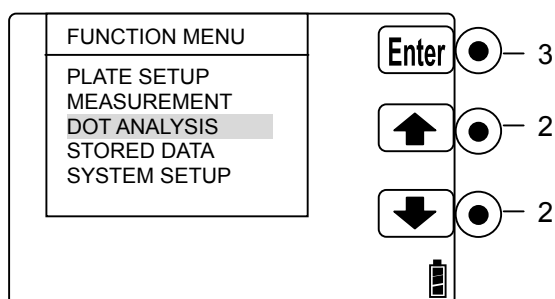
1. Press the **Prev** key on the live camera display.
2. The previous measuring data and the captured image are displayed.



DOT ANALYSIS (Advance Only)

Dot Analysis allows the user to record the dot characteristics of a plate or printing system.

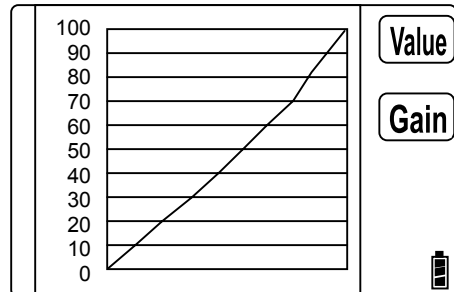
1. Press the **Menu** key to open the FUNCTION MENU.
2. Press the **↑** key or **↓** key to highlight DOT ANALYSIS.
3. Press the **Enter** key to select the DOT ANALYSIS.
4. Press the **↑** key to scroll to the MEASUREMENTS.
5. Press the **Enter** key to select the MEASUREMENTS.
6. Press the **Enter** key to select the NEW MEASURE.
7. Measure halftone values from 0% to 100% steps.
8. If a measurement fails, press the **Prev** key to erase the previous measurement data and repeat the measurement on the same patch.



DOT ANALYSIS (Advance Only)

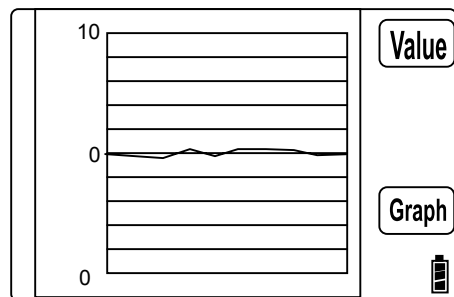
Graph

The dot percentage graph is displayed.



Gain

The dot gain graph is displayed.



Value

Measured screen values are displayed.

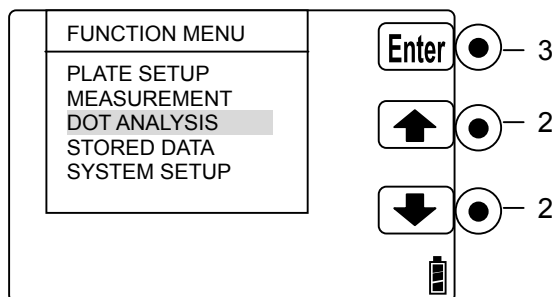
STEP	DATA	STEP	DATA	
0.0	0.0	100.0	100.0	
10.0	9.5			
20.0	19.2			
30.0	28.5			
40.0	39.0			
50.0	48.8			
60.0	58.9			
70.0	67.2			
80.0	78.4			
90.0	89.2			

To the right of the table are two buttons labeled 'Gain' and 'Graph'. At the bottom right is a battery icon.

DOT ANALYSIS (Advance Only)

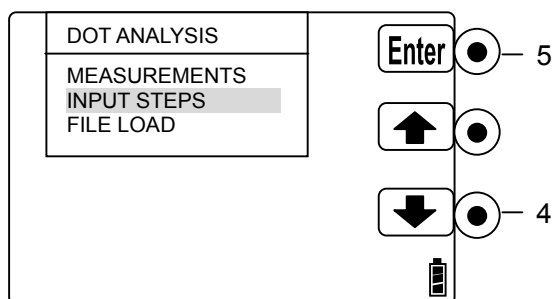
How to customize the screen values.

1. Press the **Menu** key to open the FUNCTION MENU.



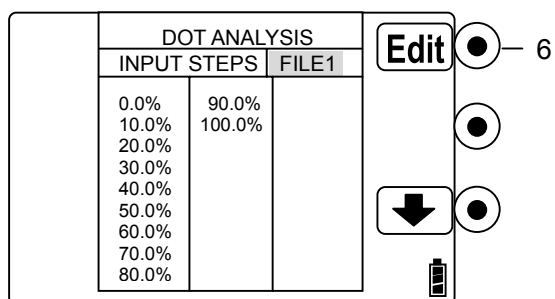
2. Press the **↑** key or **↓** key to highlight the DOT ANALYSIS.

3. Press the **Enter** key to select the DOT ANALYSIS.



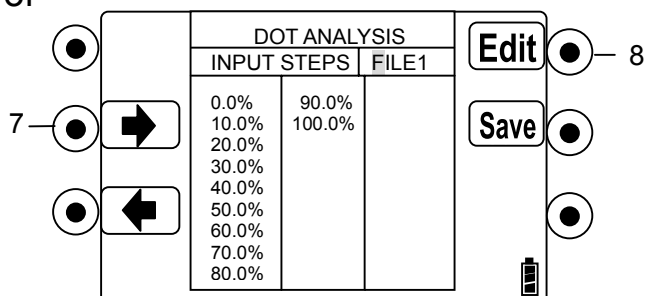
4. Press the **↓** key to scroll to the INPUT STEPS.

5. Press the **Enter** key to select the INPUT STEPS.





6. Press the **Edit** key to edit the template name.


7. Press the **→** arrow keys to select the first character of the name you want to change.








8. Press **Edit** key to select the first character.




DOT ANALYSIS (Advance Only)


9. Press the  key or  key to change the first character of the name.


10. Press the  key to finish editing the first character.





DOT ANALYSIS						
INPUT	STEPS	PILE1				
0.0%	90.0%					
10.0%	100.0%					
20.0%						
30.0%						
40.0%						
50.0%						
60.0%						
70.0%						
80.0%						


11. Press the  arrow key to move to the next character. Repeat the same procedures until you finish editing all characters of the template name.



DOT ANALYSIS					
INPUT	STEPS	PILE1			
0.0%	90.0%				
10.0%	100.0%				
20.0%					
30.0%					
40.0%					
50.0%					
60.0%					
70.0%					
80.0%					





12. Press the  key to store this input.

13. Press the  key to scroll to the item requiring editing.

DOT ANALYSIS						
INPUT	STEPS	PLATE				
0.0%	90.0%					
10.0%	100.0%					
20.0%						
30.0%						
40.0%						
50.0%						
60.0%						
70.0%						
80.0%						

14. Once the screen value is highlighted, press the  key to edit the value.


15. The value selected will flash. Use the  key or  key to increase or decrease the value.

DOT ANALYSIS						
INPUT	STEPS	PLATE				
0.0%	90.0%					
10.0%	100.0%					
20.0%						
28.0%						
40.0%						
50.0%						
60.0%						
70.0%						
80.0%						

DOT ANALYSIS (Advance Only)

16. Press the **Enter** key to record the value.

DOT ANALYSIS		
	INPUT STEPS	PLATE
Insert	0.0%	75.0%
	10.0%	80.0%
Delete	20.0%	90.0%
	25.0%	100.0%
	30.0%	
Sort	40.0%	
	50.0%	
	60.0%	
	70.0%	

Edit
↑
↓


Repeat these steps until all values have been entered or corrected. Press the Exit key at the back of the instrument to complete this setup procedure.

DOT ANALYSIS (Advance Only)

INSERT key

The **Insert** key allows the operator to insert a new screen value to an already existing screen steps.

1. Press the **↑** key or **↓** key to scroll to the next value you want to add.
2. Press the **Insert** key to insert the new cell on the value you selected.

Insert	DOT ANALYSIS		Edit
	INPUT STEPS	FILE 4	
Delete	0.0%	90.0%	<div>↑</div> <div>↓</div>
	10.0%	100.0%	
	20.0%		
	30.0%		
	40.0%		
	50.0%		
	60.0%		
	70.0%		
	80.0%		
	Sort		

2 — ● **Insert**

● **Delete**


● **Sort**

DOT ANALYSIS		
INPUT STEPS		FILE 4
0.0%	80.0%	
10.0%	90.0%	
20.0%	100.0%	
0.0%		
30.0%		
40.0%		
50.0%		
60.0%		
70.0%		

Edit

↑

↓



DELETE key

The **Delete** key allows the operator to delete an existing screen value.

1. Press the **↑** key or **↓** key to the screen value to be deleted.
2. Press the **Delete** key to delete the value.

Insert	DOT ANALYSIS		Edit
	INPUT STEPS	FILE 4	
Delete	0.0%	75.0%	↑
	10.0%	80.0%	
	20.0%	90.0%	
	25.0%	100.0%	
	30.0%		
	40.0%		
	50.0%		
	60.0%		
	70.0%		
	Sort		

<div><div></div></div>	Insert	DOT ANALYSIS		<div>Edit</div>
		INPUT STEPS	FILE 4	
2 <div><div></div></div>	Delete	0.0%	80.0%	<div>↑</div>
		10.0%	90.0%	
		20.0%	100.0%	
		30.0%		
		40.0%		
		50.0%		
		60.0%		
		70.0%		
		75.0%		
		<div><div></div></div>	Sort	
				<div>🔋</div>

DOT ANALYSIS (Advance Only)

SORT key






The **SORT** key is used to sort the screen step values in an ascending order.

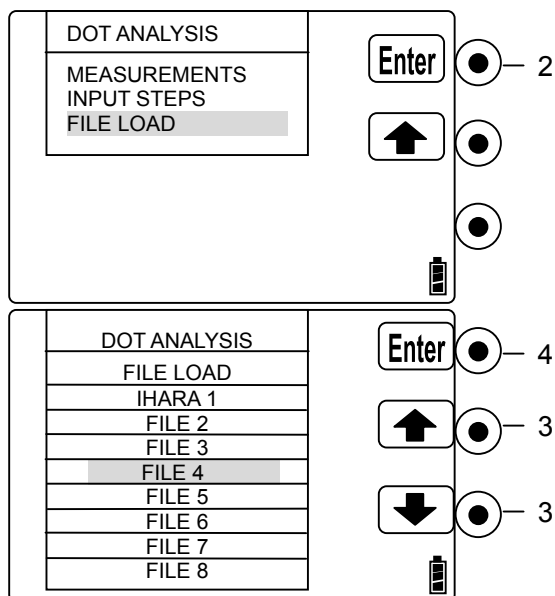
DOT ANALYSIS			Edit
INPUT STEPS	FILE 4		
10.0%	100.0%		↑
20.0%	0.0%		
30.0%	25.0%		↓
40.0%	75.0%		
50.0%			↑
60.0%			
70.0%			↓
80.0%			
90.0%			

DOT ANALYSIS			Edit
INPUT STEPS	FILE 4		
0.0%	75.0%		↑
10.0%	80.0%		
20.0%	90.0%		↓
25.0%	100.0%		
30.0%			↑
40.0%			
50.0%			↓
60.0%			
70.0%			

DOT ANALYSIS (Advance Only)

Steps to load the stored screen steps template:

1. Press the  key to highlight FILE LOAD in the DOT ANALYSIS menu.
2. Press the  key to select FILE LOAD.
3. Press the  key or  key to highlight the desired template number.
4. Press the  key to select the template file.

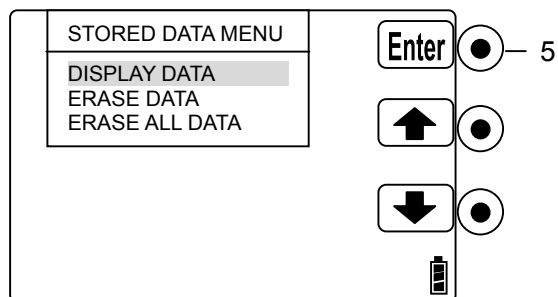
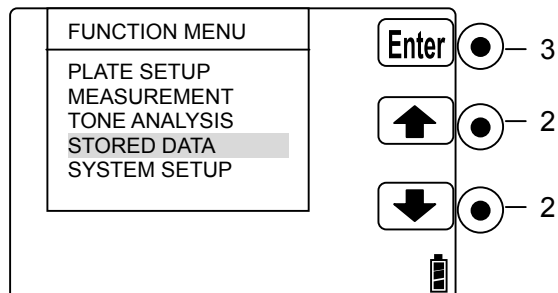


STORED DATA (Advance Only)

Maximum of 200 readings with date & time can be stored. The captured images are not saved.

Steps to display the Stored Data:

1. Press the **Menu** key to open the FUNCTION MENU.
2. Press the **↑** key or **↓** key to highlight the STORED DATA.
3. Press the **Enter** key to select the STORED DATA.
4. Press the **Enter** key to open the DISPLAY DATA.
5. The measurement data with date & time are displayed.




DATE & TIME	DOT%	CAL	
07.03.04 09:54:12	32.1%	No.1	<div>↑</div> <div>↓</div>
07.03.04 09:54:26	43.2%	No.1	
07.03.04 09:54:48	52.3%	No.1	
07.03.04 09:55:10	64.4%	No.1	
07.03.04 09:55:18	72.3%	No.1	
07.03.04 09:55:36	84.5%	No.1	
07.03.04 09:55:56	92.3%	No.1	
07.03.04 09:56:07	95.5%	No.1	
07.03.04 09:56:19	98.6%	No.1	


STORED DATA (Advance Only)


Steps to Erase Stored Data (Selectable)



Multiple data can be erased at once.


1. Press the  key to scroll to the ERASE DATA in the STORED DATA MENU.


2. Press the  key to open the ERASE DATA.


3. Press the  key to scroll to the data to be erased.

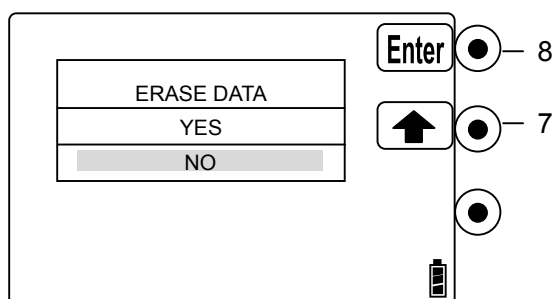
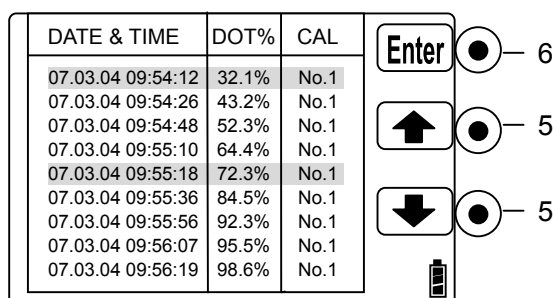
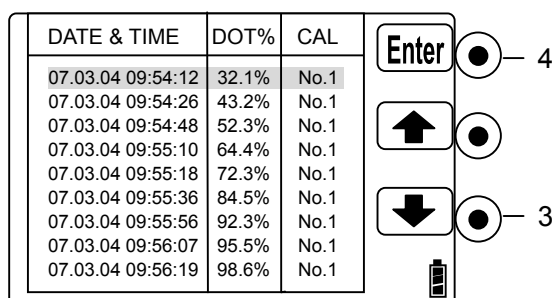
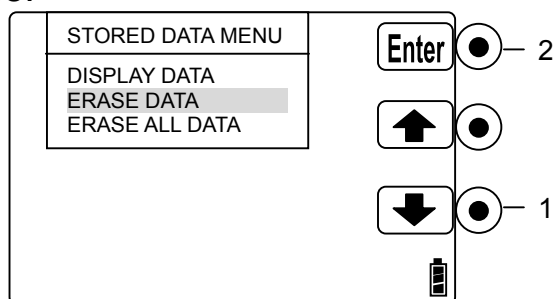
4. Press the  key to highlight the data.

5. Press the  key or  key to scroll to the last data to be erased.

6. Press the  key to select the data.





7. Press the  key to select YES.

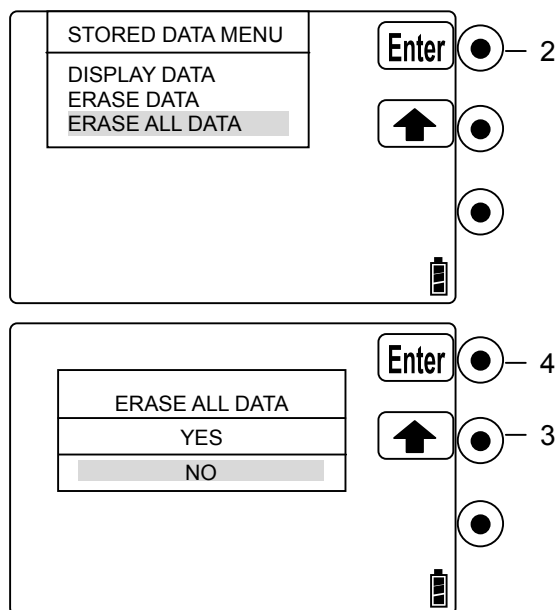
8. Press the  key and the data between the first data to the last data are erased.



STORED DATA (Advance Only)

Steps to Erase All Stored Data

1. Press the  arrow key to the ERASE ALL DATA.
2. Press the  key to select the ERASE ALL DATA.
3. Press the  key to select YES.
4. Press the  key to erase all stored data.



EXPORT IMAGE (Advance Only)

Measurement data and the captured images can be exported and saved to a PC with the optional software.

Minimum PC specification:

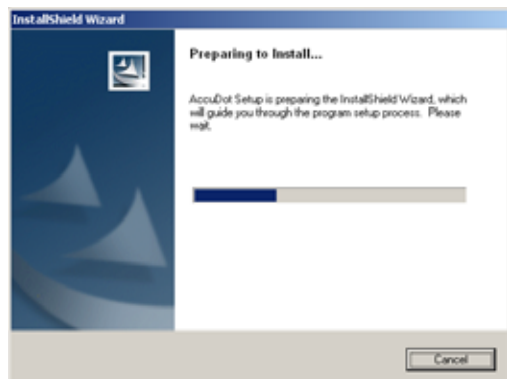
Pentium II, 300MHz, 64Mb RAM

Operating System

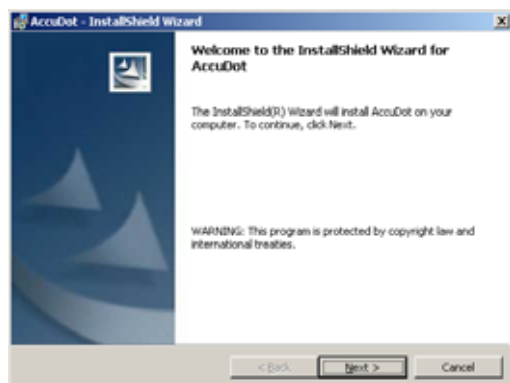
Windows 2000 / XP

Steps to install the software

1. Open the “setup.exe” in the CD-ROM



2. Click “NEXT >”.



EXPORT IMAGE (Advance Only)

3. Select “I accept the terms in the license agreement.” and click “Next >”



4. Enter your information and click “Next >”.



5. Click “Next”. When you want to install the software to the different folder, click “Change”.



6. Click “Install >” if the install settings are correct.



EXPORT IMAGE (Advance Only)

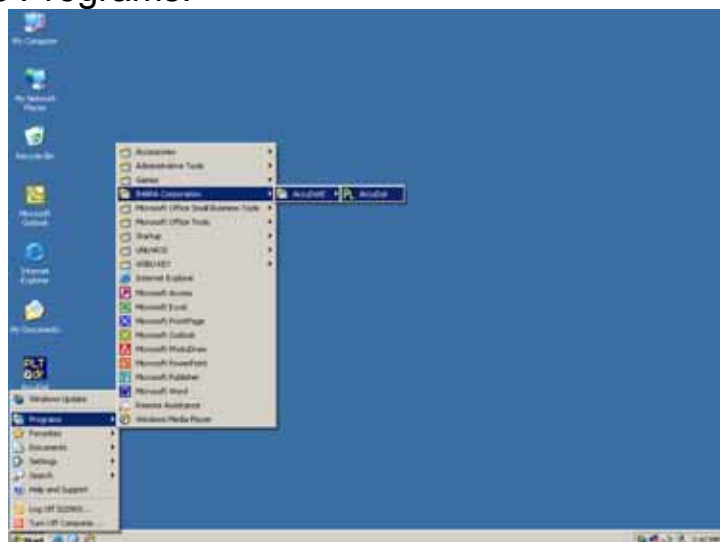
7. The software is installed.



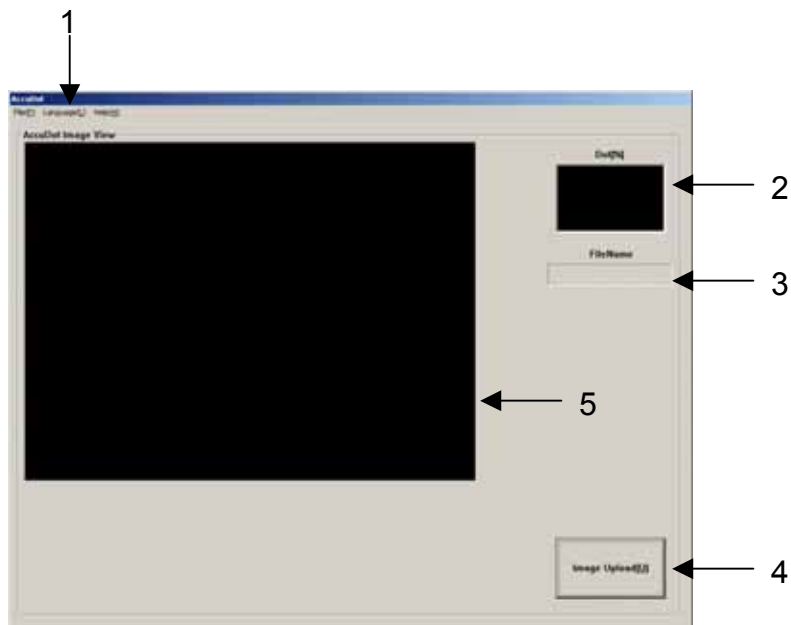
8. Install wizard is completed.



The AccuDot is in the IHARA Corporation listed in the Window's Programs.



EXPORT IMAGE (Advance Only)



1. Menu Bar

2. Measuring Data Window

Measuring data is displayed.

3. File Name

Date, time and measuring data is used as the default file name.

4. Data Upload Key

The measuring data and image are imported.

5. Image Display

Captured Image is displayed.

EXPORT IMAGE (Advance Only)

Menu Bar

a. Open

Open an image file on your hard disk or in a network. Only the bitmap file can be opened with the software.

b. Save

Save the image file. The uploaded image is automatically saved in the same folder as the software was installed. The file type is .bmp file format.

c. Print

You can print the displayed image file.

d. Exit

Close the software.

Language

Select the language English or Japanese.

Help

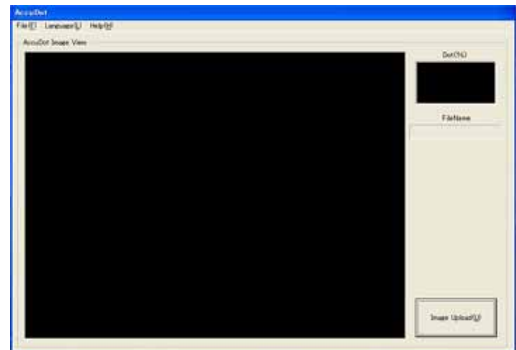
The software version information is displayed.



EXPORT IMAGE (Advance Only)

Software Operation

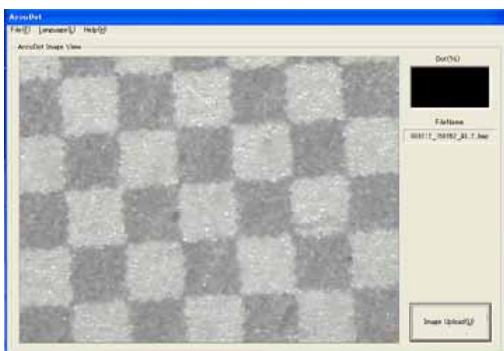
1. Open the software
2. Connect the AccuDot and PC with USB cable.
3. Take Measurements
4. Press the Image Upload button in the window.
5. The captured image and the measuring data are displayed.



The color image is uploaded when the AccuDot displays the B/W image.

The uploaded image is automatically saved in the .bmp file format.

Measurement data is not available for viewing in the measuring data window when a saved file is opened.



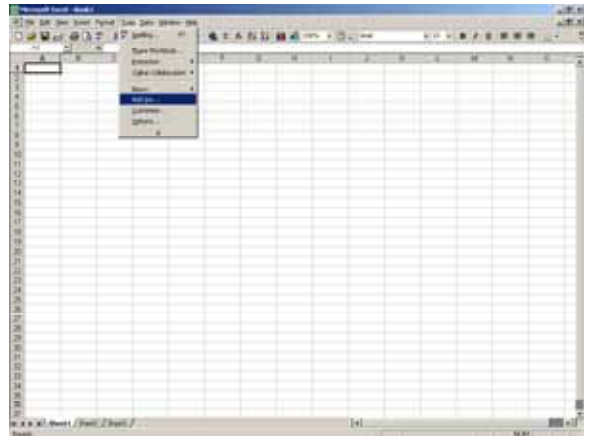
EXPORT IMAGE (Advance Only)

Steps to install the Excel Add-in Software

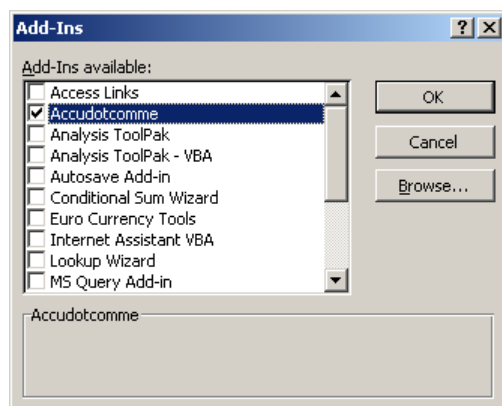
1. Copy the files,
“AccuDotDLL.dll”,
“UsbApi.dll” and
“AccuDotLight.exe” in the
C:¥Windows folder.

2. Open the Excel.

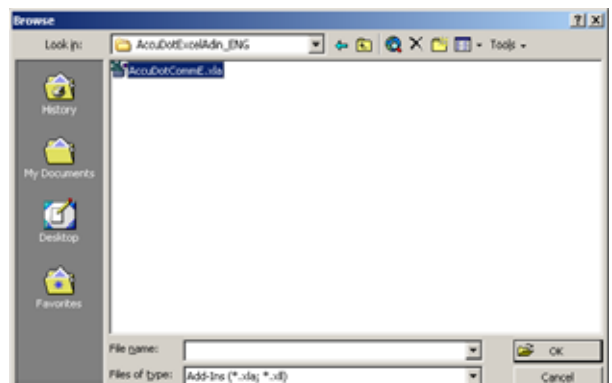
3. Open the “Add-Ins....”
listed in the Tools in the
menu.



4. Click the “Browse...” on
the Add-Ins window.



5. Select the
“AccuDotComm.xla” and
click OK.

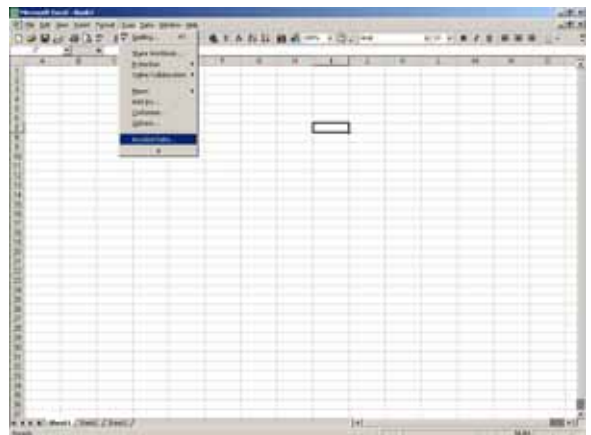
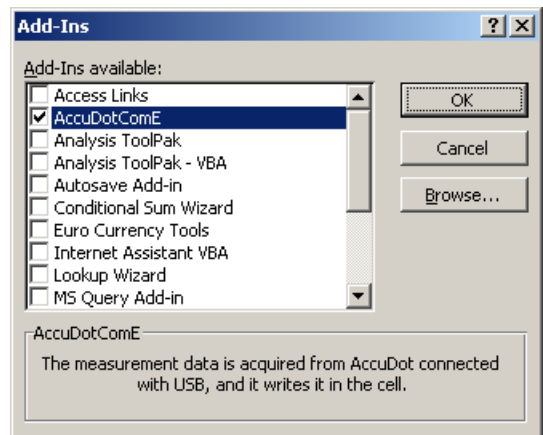


EXPORT IMAGE (Advance Only)

6. Check “AccuDotComE” is added in the list and it is selected on the check box.

7. Click OK.

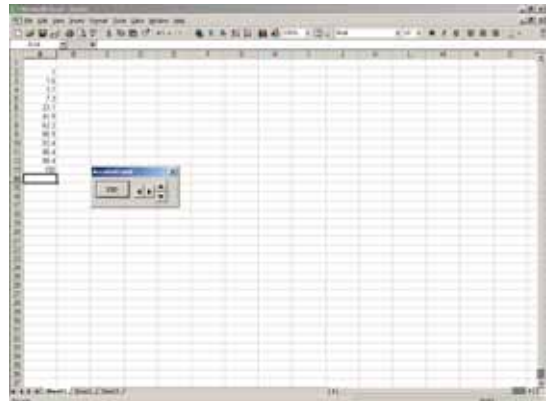
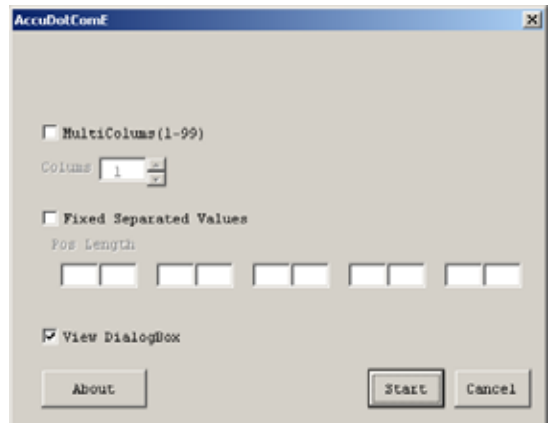
8. “AccuDot Data...” is listed in the Tools menu.



EXPORT IMAGE (Advance Only)

Steps to import the measuring data from AccuDot

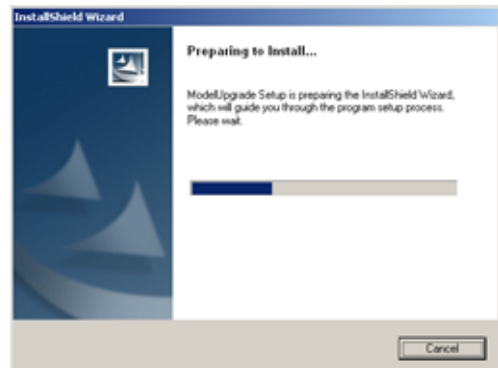
1. Connect AccuDot and PC with the USB cable.
2. Open Excel file and click the cell you want to import the measuring data.
3. Select “AccuDot Data...” in the Tools menu.
4. Setup the details of the measurements import.
5. The measuring data is imported in the Excel file.
6. Click “END” to stop importing the data.



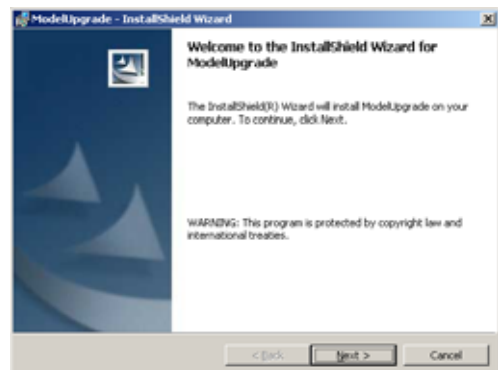
UPDATE FIRMWARE

Steps to install the software

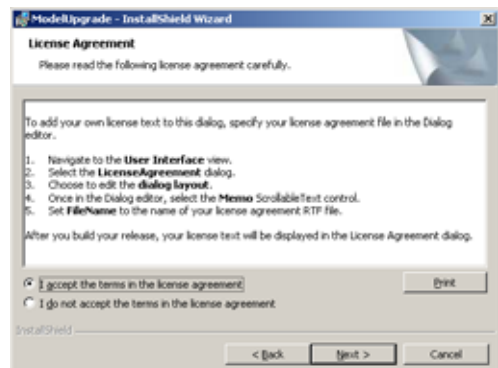
1. Open the “setup.exe” in the CD-ROM



2. Click “NEXT >”.



3. Select “I accept the terms in the license agreement.” and click “Next >”

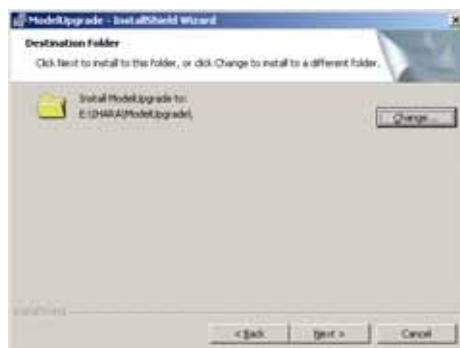


UPDATE FIRMWARE

4. Enter your information and click “Next >”.



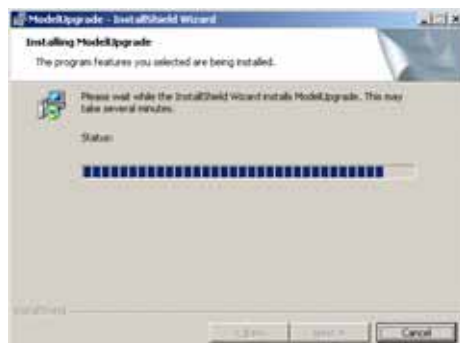
5. Click “Next” or click “Change” to install to a different folder.



6. Click “Install >” if the install settings are correct.

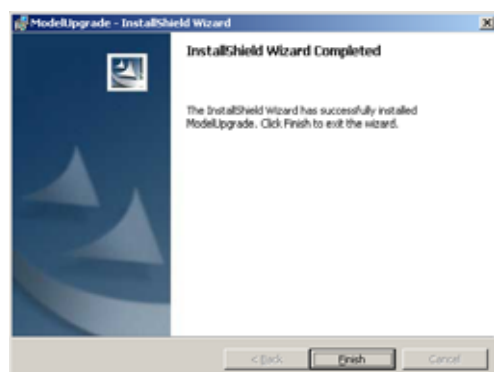


7. The software is installed.

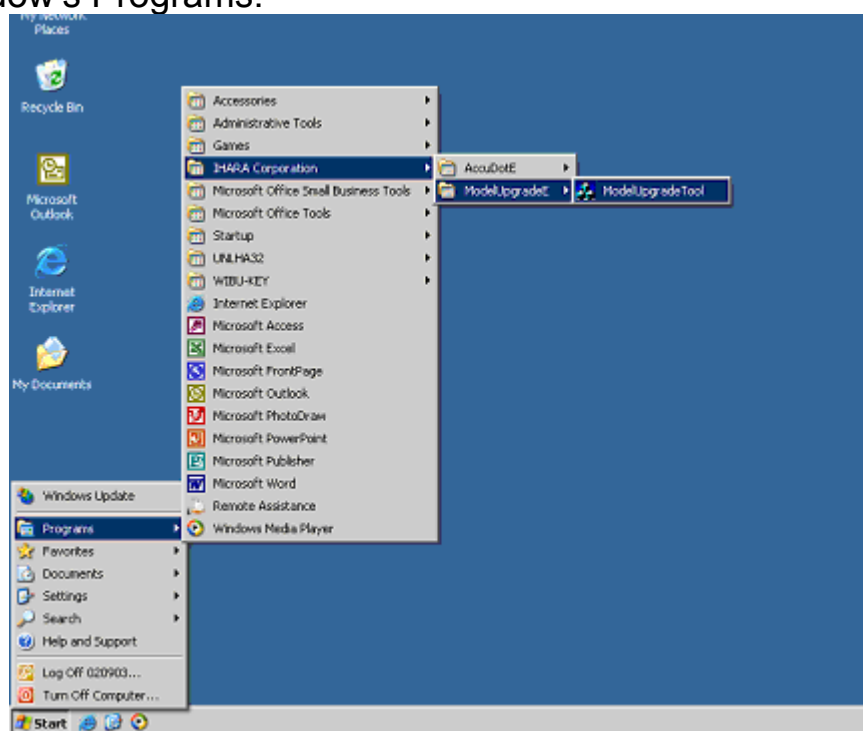


UPDATE FIRMWARE

8. Install wizard is completed. Press “Finish”.



The AccuDot is in the IHARA Corporation listed in the Window's Programs.



UPDATE FIRMWARE

The screenshot shows the 'AccuDot ModelUpgradeTool' window. On the left, there is a large empty box labeled 'AccuDot Program'. Below it, the 'Model' section has three radio buttons: 'Import' (selected), 'Basic', and 'Advance'. A 'Select Directory' button is positioned below these options. On the right side, there are several input fields: a 'Language' dropdown menu set to 'English', a 'Newest Program[.iha]' text box, a 'Serial No.' text box, and a 'LicenseKey' text box. Below these is a larger text box with the instruction 'Please select the latest program file'. At the bottom left, the version information 'AccuDot Model Upgrade Tool Ver 0.55 Jun 5 2008 16:58:04' is displayed. At the bottom right, there are two buttons: 'Download[D]' and 'Close[C]'.

AccuDot ModelUpgradeTool

AccuDot Program

Language
English

Newest Program[.iha]

Serial No.

LicenseKey

Model
☒ Import ☐ Basic ☐ Advance

Select Directory

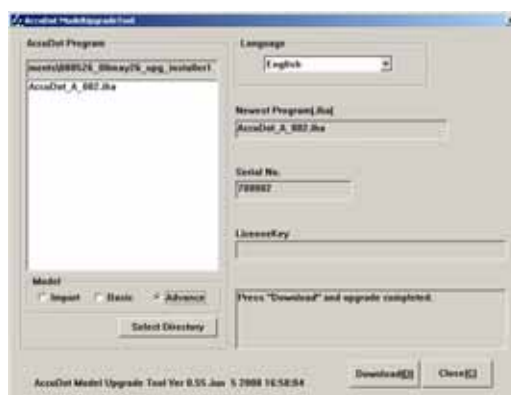
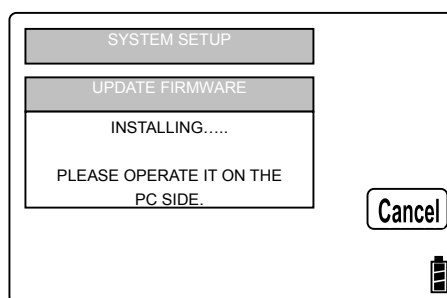
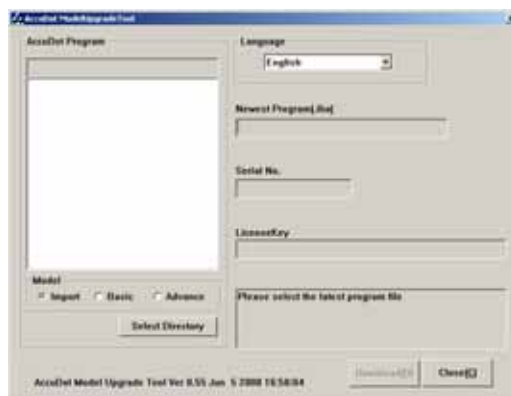
Please select the latest program file

AccuDot Model Upgrade Tool Ver 0.55 Jun 5 2008 16:58:04

Download[D] Close[C]

UPDATE FIRMWARE

1. Open the ModelUpgradeTool.
2. Connect the AccuDot and PC with USB cable.
3. Open the SYSTEM SETUP menu with AccuDot.
4. Press the down arrow key to select UPDATE FIRMWARE.
5. Press ENTER key to select UPDATE FIRMWARE menu.
6. The AccuDot's serial number is displayed at the ModelUpgradeTool window.
7. Select the model you upgrade in the Model Check Box.
8. Press "Select Directly" button and select the downloaded newest firmware folder.



UPDATE FIRMWARE

9. The latest firmware folder is selected automatically. The firmware name is displayed in the white box.

10. Press “Download” and AccuDot starts downloading the firmware from PC.

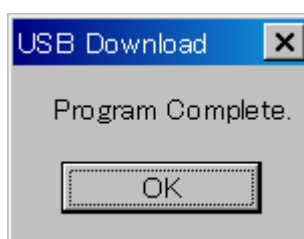
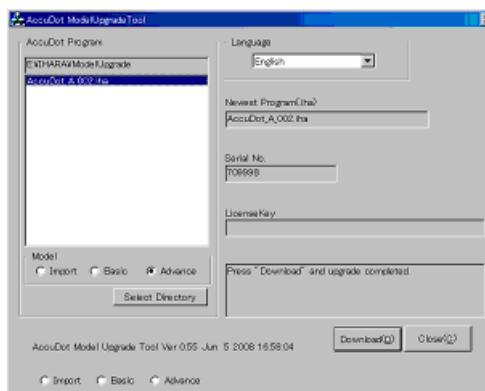
11. After the new firmware is transferred to the AccuDot, the firmware writing starts with the AccuDot. (It takes 1 minute to finish the firmware writing.)

12. “Program Complete” is displayed.

13. When unplug the AccuDot from PC, please use the “Safely Remove Hardware” operation.

14. Turn off the AccuDot and turn it on, again.

15. The current model is displayed at the version information in the System Setup menu.



SYSTEM SETUP	
VERSION INFORMATION	
ACCUDOT	
MODEL	ADVANCED
SERIAL NO.	709998
FIRMWARE VER.	1.12
PRODUCT NO.	000001
MEASUREEMNT NO.	2
NO. OF SECURITY	0

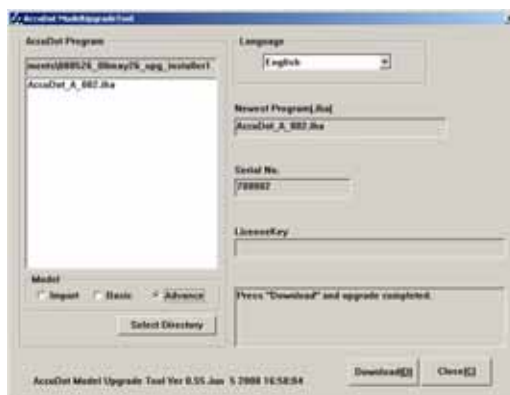
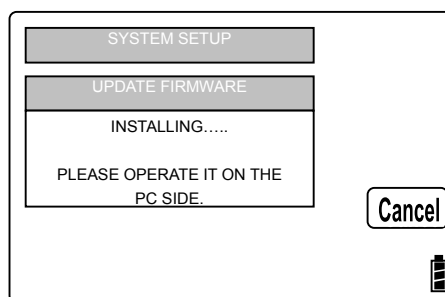
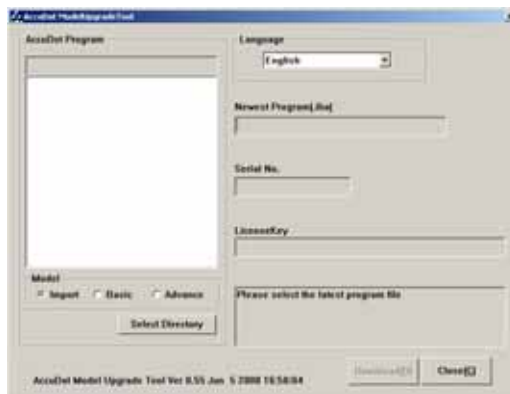
UPDATE FIRMWARE

CAUTION

While the firmware is downloaded to the AccuDot, Don't remove the USB cable.

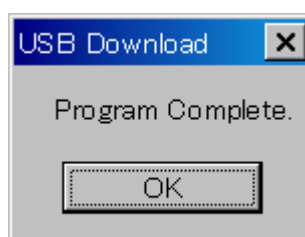
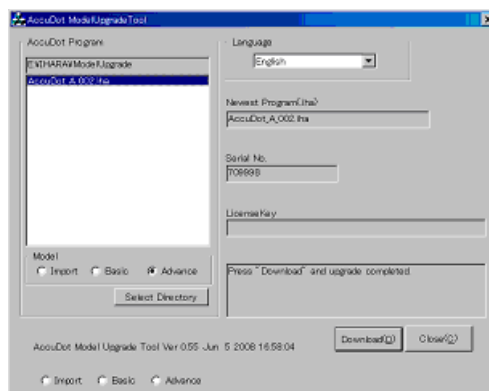
UPGRADE FIRMWARE

1. Open the ModelUpgradeTool.
2. Connect the AccuDot and PC with USB cable.
3. Open the SYSTEM SETUP menu with AccuDot.
4. Press the down arrow key to select UPDATE FIRMWARE.
5. Press ENTER key to select UPDATE FIRMWARE menu.
6. The AccuDot's serial number is displayed at the ModelUpgradeTool window.
7. Select the "Advance" in the Model Check Box.
8. Enter the License key in the LicenseKey window.



UPGRADE FIRMWARE

9. Press “Download” and AccuDot starts downloading the firmware from PC.
10. After the new firmware is transferred to the AccuDot, the firmware writing starts with the AccuDot. (It takes 1 minute to finish the firmware writing.)
11. “Program Complete” is displayed.
12. When unplug the AccuDot from PC, please use the “Safely Remove Hardware” operation.
13. Turn off the AccuDot and turn it on, again.
14. The current model is displayed at the version information in the System Setup menu.



SPECIFICATIONS

Functions	Dot % Dot Size Screen Ruling (LPI, LPC) Screen Angle Enlarge Image
Measurement Media	Plate (Pos / Neg Reading) Printed Copy (CMYK Dot%)
Measurement Range	0-100 % (AM: 100lpi - 300lpi) (FM: 10μm - 50μm)
Light Source	LED
Light Color	White
Image Sensor	Color Image Sensor
Image Sensor Resolution	656(H)×492(V)
Aperture Size	φ1.6
Target Size	0.8 x 0.6 mm
Repeatability	±0.5 %
Calibration	0%, 100% and 50%
Data Storage	200 data
Display	320×240 Color (262,144 color)
Language	Japanese, English
Power Supply	Li-ion Battery
Measurements Per Charge	Approx. 2,000 times (Internal Testing)
Recharge Time	Approx. 2 hours
Computer Output	USB
Minimum PC Specification	CPU : Pentium II 300MHz 64MB RAM
Operating System	Windows2000, XP
Dimensions	200(L)×93(D)×73mm(H)
Weight	Approx. 500g (With Batteries)
Power Off Timer	40 / 90 / 210 / Disable
Security User Code	Installed
Operating Temperature Range	41F - 104F (5 – 40C)
Accessories	AC Adapter Operation Manual Cable PC software

TECHNICAL SUPPORT

To obtain prompt service, please have the following information ready prior to contacting our technical support center.

1. Model number
2. Serial number
3. Date of purchase
4. Place of purchase
5. Name, telephone and fax number
6. Clear description of the problem.

Ihara technical support center:

North & South America, Europe: +1 661 257 5772
<http://www.ihara-us.com>

Asia & Oceania: +81 568 81 7060
<http://www.ihara-group.com>

WARRANTY INFORMATION

A warranty statement and a warranty registration card are enclosed with each instrument. Please read the warranty information carefully and the limitations of coverage.

The warranty statement explains the terms of coverage. Please submit the warranty registration card or complete online at www.ihara-us.com within 10 days of purchase.

Ihara Instrument Loaner Program

If for any reason covered under the warranty the instrument becomes inoperable during the warranty period, Ihara will provide a unit (same model or later version) for the customer as a loaner while the inoperable unit is being serviced. The only cost to the owner would be the cost of shipping.

Service After The Warranty Period

Once the warranty expires, Ihara will provide a similar service to all customers with a nominal charge.

WARRANTY INFORMATION

Returning Your Instrument For Service

To assure effective servicing of your instrument, please follow these instructions:

- a. Obtain an RMA (Return Material Authorization) number from our technical service center (See page 71)
- b. Provide description of the exact configuration at the time of the malfunction.
- c. Provide brief description of the symptoms for service personnel.
- d. If purchased through an IHARA dealer, provide a copy of the sales slip or other proof of purchase to establish the warranty coverage period.
- e. Provide your name, address, and a phone number where you may be reached during the day.

MANUFACTURED BY
IHARA ELECTRONIC IND. CO. LTD.
KASUGAI CITY, JAPAN

www.ihara-group.com