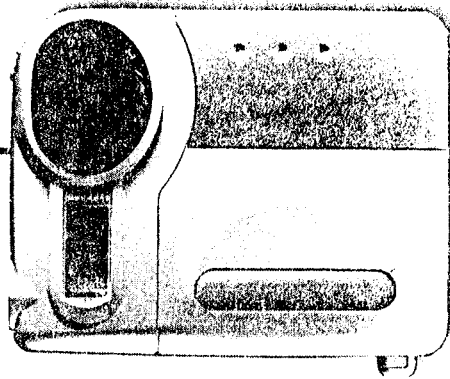
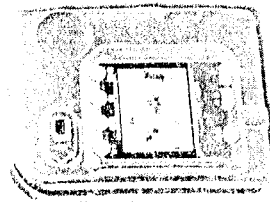


FCC ID: NJB00820123



DIGITAL CAMERA

Owner's Manual
Manuel d'utilisation
Benutzer Handbuch
Manuale D'uso
Manual de Usuario
使用手冊



CE

90239-100A

QTK2000-F024

Premier Digital Camera, Model DC-820

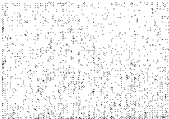
FCC ID: NJB00820123

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, use only with provided AC Adaptor and shielded USB interface cable with ferrite cores when connecting to computer. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.



Getting Started

Congratulations on purchasing your new digital camera. This state-of-the-art camera affords the convenience and flexibility of a digital image capture device while retaining the ease of use of traditional cameras. A full-color LCD (Liquid Crystal Display) monitor allows you to immediately see the pictures you have taken. A built-in, non-expiring flash and an auto-flash sensor, which automatically detects whether the flash should be engaged, help ensure that your pictures turn out right. 4MB of digital memory, as well as easy memory extension with Compact Flash memory card gives generous, flexible image storage capacity.

Pictures taken with your digital camera can be easily downloaded to your computer with the included TWAIN Acquisition software. Once downloaded, you can use image editing software to enhance your pictures before emailing or printing them. With the FotoPrint 800 instant printing interface, it is also possible to print photos directly from the camera to compatible printers.

What's Inside:

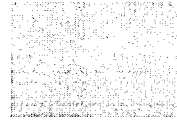
- Digital Camera
- Quick start Guide
- Owner's Manual
- Serial cable (PC Version) (A ferrite core bonded)
- Video cable (A ferrite core bonded)
- CD ROM (image editing software)
- 4 x AA alkaline batteries

Optional Items:

- 7.0V power adaptor (Two ferrite cores bonded)
- USB cable (A ferrite core bonded)
- FotoPrint 800 direct printing interface (see Appendix 3)
- 4MB, 8MB, 16MB or 32MB, Compact Flash memory card

CD-ROM Contents

- Image Editing Software - Allows you to quickly and easily touch up any photo captured with your camera.
- TWAIN Acquire Module - Lets you download pictures from all TWAIN-compliant devices to your computer.

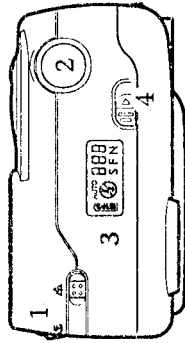


System Requirements (Windows)

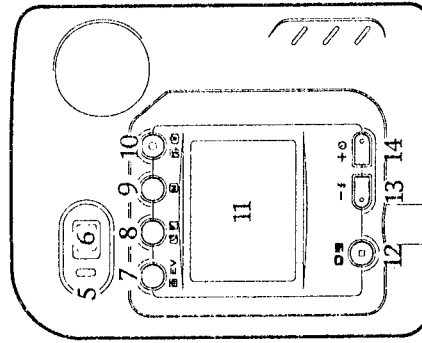
- 486, 33MHz processor or faster
- Microsoft Windows 95 or higher
- 8MB or more of RAM
- 20MB of hard disk space
- available serial port or USB port and CD-ROM drive
- color display (640x480 24-bit or higher recommended)

Getting to know the camera

1. Focus (Macro/Normal)
2. Shutter release
3. LCD panel
4. Power



5. Ready LED
6. View finder
7. Multiple display/EV
8. Erase/Quality
9. Menu
10. Play/Record
11. LCD display
12. Display on/off
13. Backward/Flash
14. Forward/Self-Timer



Using the camera

Power Supply

This camera features a two-way power supply that lets you use either batteries (AA-size Alkaline) or a household AC current.

Inserting Batteries

1. The battery door is located on the bottom of the camera. Slide the switch on the battery door in the direction indicated by the arrow.
2. The door should spring partially open. Gently open it the rest of the way with your finger.
3. Insert the batteries as indicated on the inner side of the battery door.

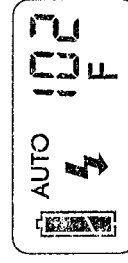


Notes:

- If you are not going to be using the camera for an extended period of time, you should remove the batteries to prevent leaks or corrosion.
- Never use manganese batteries.
- Never mix old and new batteries.
- Low temperatures (under 0°C) may reduce the output efficiency of batteries, thereby shortening the operation time of camera.
- The recommended battery types are PANASONIC, TOSHIBA or DURACELL ULTRA Alkaline or rechargeable.

Battery Life Indicator

When the camera has sufficient power, the Battery Power icon on the LCD panel will be fully shaded. When power is low, only the lower portion of the icon will be shaded. This indicates that the batteries are weak and need to be replaced. It is recommended that you do not use the Flash or Auto-Flash features while battery power is low. Generally, once the Low Power icon appears, approximately 10 minutes of operation time is available. When the batteries are completely dead, the camera will not turn on.



Flash Memory

This camera features flash memory for storing image information. Like the hard drive of a computer, this memory does not require electrical power to function. This means that any pictures you take will not be lost when the camera is turned off or low on power. If the batteries go dead, simply insert a new set or connect the AC power supply and you will be able to retrieve and view any previously captured photos.

Extended Flash Memory

You can extend the storage capacity of your camera by adding a Compact Flash memory card. This card is a removable ATA-compatible memory device that gives your camera additional memory. With 2M memory, for example, you can take 25 extra pictures in XGA Normal mode, 13 pictures in XGA Fine mode or 6 pictures in XGA Super Fine mode. To install the Compact Flash memory card, open the card slot located on the side of the camera and insert the card. Once the card is properly inserted, close the card slot cover and the camera memory will be updated automatically. To remove the card, push the Eject key.

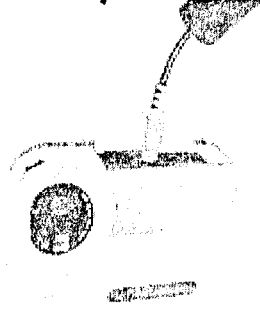
Note:

Please FORMAT the Compact Flash (CF) card first, when you get ready to use a new card. This procedure will avoid the compatibility problems due to the CF card configuration difference of brands.



Using AC Power

- To run the camera on standard AC power, use the 7.0V/2.5A Adaptor that comes with the camera.
- Always be sure to use the AC adaptor which comes with the camera, or optional from the manufacturer. Any other adaptor may cause damage to the camera, which is not covered under the warranty.
- Grasp the adaptor, not the cord, when unplugging the adaptor from a wall socket.
- If the power cord becomes damaged (exposed or severed wires, etc.), please purchase a new AC adaptor. Use of a damaged cord may cause fire or electrical shock.
- Switch off and disconnect the camera from the AC adaptor before unplugging it from the wall socket.



Auto Power Off

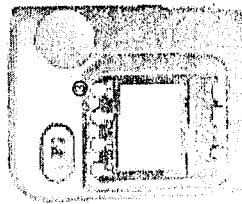
This camera is equipped with an automatic power off function that will switch off the camera if no operations are performed for a specific interval of time. This time interval can be set between one and 99 minutes. For instructions on setting this interval, see the Menu Mode section on page 16 of this manual.

Taking Pictures

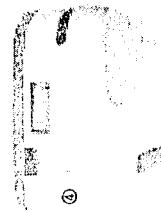
1. Turn the camera on by sliding the Power switch (located on the top of the camera) in the direction indicated by the arrow, and then releasing it. When the camera is activated, the Ready LED (located beside the Viewfinder) will flash as the camera powers on.



2. Set Focus to Normal or Macro mode using the Focus (Macro/Normal) mode switch located at the top corner of the camera, above the lens. Set the camera to Normal if the object or view you wish to photograph is 70cm or more away from the camera, and to Macro if the object or view is between 15 to 30cm away.



3. Make sure that the camera is in Record mode. The Play/Record mode button is located at the upper right corner of the LCD Display on the back of the camera.

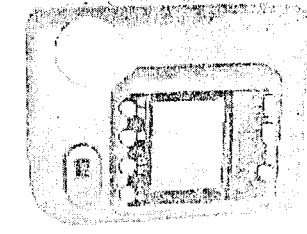


4. Using the Viewfinder or the LCD Display (you need to turn on LCD Display by using the LCD Display On/Off button if LCD Display is not on), select your image. When you are ready, press the Shutter release button.

5. The LCD screen will display a static copy of the picture just taken for a few seconds while the camera saves it to memory. In the meantime, the dialog "DELETE NOW?" would show on the LCD, you could delete the image right now by pressing the Erase button. Once the LCD resumes normal viewing, you can take another picture or switch to Play mode to view the image you just recorded.

Using the LCD Display

Using the built-in Liquid Crystal Display (LCD), you can view pictures a few seconds after capturing them. The following section describes how to use the LCD and its various functions.



Note: Using the LCD display while taking pictures shortens the life span of your batteries. To save battery power you can take pictures without the LCD display. To turn off the LCD display, use the Display On/Off button (located at the lower left corner of the LCD display on the back of the camera), and simply use the Viewfinder to frame the image as you would with a traditional camera.

Adjusting LCD Brightness

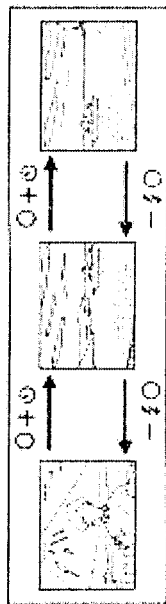
The brightness of the LCD display can be adjusted using the radial dial located on the bottom of the camera, directly beneath the LCD display. Turning the dial with your fingernail or a small coin adjusts the brightness up and down.



Viewing Pictures on the LCD

1. After turning on the Power, press the Play/Record button to switch to Play mode. The LCD display warms up and then displays the last picture taken. If there are no pictures in the camera, a message will be displayed to inform you of this.
2. Press the Forward or Backward buttons to scroll through the pictures stored in memory.

3. Press the Play/Record button again to return to Record mode and resume taking pictures.



Viewing Thumbnails

Thumbnail Viewing mode allows you to simultaneously view nine thumbnail images of the pictures stored in the camera's memory.

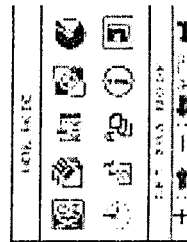
To view image thumbnails:

1. Make sure that you are in Play mode.
2. Press the Multiple display/EV button to enter the Thumbnail mode. The Multiple display/EV button is located at the upper left corner of the LCD display on the back of the camera.
3. If there are more than nine pictures in the camera's memory, use the Forward or Backward buttons to scroll through the pictures to the next or previous screens.
4. Press the Multiple display/EV button again to exit Thumbnail mode.

Menu Mode

To enter Menu Mode, press the Menu button. The Menu button is the second button from the top right corner of the LCD display on the back of the camera. The LCD image is replaced by the built-in functions menu, containing options that allow you to set the camera status. To use these functions, simply highlight the one you want to engage with the Forward or Backward button, and then press the Shutter release button to select it.

The nine functions in Menu Mode are:



- **VGA/XGA mode** - sets resolution for captured images. In VGA mode, images are captured at 640X480 pixels. In XGA mode, images are captured at 992X760 pixels. Use the Shutter release button to toggle between the two options.

Note: The included TWAIN driver will automatically convert pictures taken in XGA mode to 1024x768 pixels when the images are downloaded to a computer.

- **Erase All** - erases all the images in the built-in flash memory and in the Compact Flash memory card. Before the erase procedure takes place, you will be prompted to confirm it.

- **Copy To Card** - copies images in camera memory to Compact Flash memory card. After the command is executed the camera will display one of the following messages:

TOTALLY MOVED - all images files have been successfully moved to the Compact Flash memory card.

PARTIALLY MOVED - only some of the images have been moved to the Compact Flash memory card. This message will appear if there is not sufficient free space on the card for all the images in the camera's memory.

NONE MOVED - none of the image files have been transferred to the Compact Flash memory card. This message will appear if there is no free space on the card, if there is no card installed, or if there is a card error.

- **Auto/Preset White Balance** - different light sources produce light of different colors. White balance allows you to obtain the highest color fidelity possible by taking into account the lighting conditions in which the camera is operating. Five white balance modes are available:

Auto White Balance - automatically chooses the best white balance for given lighting conditions

Day Light (Bright Sun)

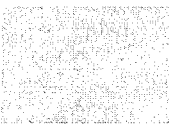
Cloudy Sky/Shade

Lamp Lighting

Fluorescent Lighting

Select the desired white balance option by pressing the Shutter release button until the icon for that mode appears, and then hit the Menu button to exit Menu mode.

Note: The camera resets to Auto White Balance if the power is switched off.



Format Memory - this command is used to manually format the Compact Flash memory card and format internal flash memory also. The camera will prompt you to confirm this operation before formatting the card.

Notes:

- If an unformatted or incorrectly formatted Compact Flash memory card is installed, the camera will automatically format the card when powered on.
- The Format Card command will totally destroy all data stored on the Compact Flash memory card, while the Erase All command will only delete files recognized by the camera as image files of the type that it is capable of producing.

Set Date/Time - allows you to set the time and date that appear on your pictures. Use the Forward or Backward button to select the field to be changed and the Shutter release button to increase the number in the selected field. Selecting the OK option will accept the current time and date settings. Selecting the Exit option will reject any changes and exit Set Date/Time mode.

Set Auto Power Off - allows you to set the interval for auto shut off. Use the Forward or Backward button to select the field to be changed and the Shutter release button to increase the number in the selected field. Selecting the OK option will accept the current Auto Power Off interval. Selecting the Exit option will reject any changes and exit Set Auto Power Off mode. The Auto Power Off interval can be set to between one and 99 minutes.

Set Manual/Auto Play - chooses between the two types of image playback mode. In Manual Play mode, use the Forward or Backward button to scroll through pictures stored in the camera's memory. In Auto Play mode, the pictures will scroll by automatically, as with a slide show. Use the Shutter release button to toggle between these two modes.

Set Information Icon On/Off - in record mode, there will be a date icon display on LCD if icon mode is setting on. In play mode, there will be a file status icon display on LCD if icon mode is setting on.

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Erasing Pictures from Memory

The Erase button allows you to delete any unwanted pictures from the memory. To delete pictures, please note that the LCD display must be turned on.

1. After turning the camera on, press the Play/Record button to enter Play mode.
2. To delete a picture, scroll to that picture using the Forward or Backward button and press the Erase button. The camera will prompt you to confirm the deletion before it proceeds. Press the Forward button for Yes or the Backward button for No. After erasing a picture, return to Record mode by pressing the Play/Record button again.
3. To erase all the pictures in memory, select the Erase All command in Menu Mode. Pressing the Shutter release button deletes all images in the camera's internal memory and on the Compact Flash memory card. The camera will prompt you to confirm the deletion before it proceeds.

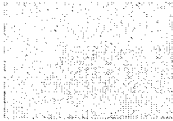


Defining Picture Quality

Two different elements combine to determine the quality of the pictures that you take. The first is resolution. This digital camera can take pictures at two different resolutions: VGA (640X480 pixels) and XGA (992X760 pixels). The second element is the amount of compression applied to captured images. This camera can capture at three possible compression settings: Normal (highest compression), Fine (medium compression) and Super Fine (lowest compression). The higher the resolution and the lower the compression, the higher the image quality will be. Higher quality images, however, have larger image file sizes, and therefore, fewer of them can be stored on the camera at one time. The following table shows the number pictures of various qualities that can be stored on a 4MB built-in flash memory.

Quality:

XGA			VGA		
Super Fine	Fine	Normal	Super Fine	Fine	Normal
12	25	50	24	50	100



Note:

The number of pictures that can be stored in memory with the current resolution and compression settings is displayed at all times on the LCD panel.

For instructions on how to set the camera to either XGA or VGA resolution, see the Menu Mode section on page 16 of this guide.

To set the amount of compression that the camera will use when capturing:

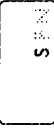
1. Make sure that the camera is in Record mode.

2. Use the Erase/Quality button (the second button from the top left corner of the LCD display on the back of the camera) to choose the desired level of compression. The level of compression will be indicated in the LCD panel as follows:

N - Normal

F - Fine

S - Super Fine



Using the Flash

This digital camera has three different flash modes:

- Auto (default mode) - the camera automatically fires the flash when the brightness of the subject or scene is too low.
- Fill - fires the flash regardless of the brightness levels in the vicinity, but varies flash strength according to the ambient brightness of the surroundings. This means that the flash will be stronger in darker areas and weaker in brighter areas.

- Off - the flash is disengaged no matter what the ambient brightness of the surroundings is.

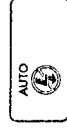
To set the Flash mode:

1. Make sure that the camera is in Record mode.
2. Use the Backward/Flash button to choose the desired Flash mode. The currently selected Flash mode will be indicated in the LCD Panel with the following icons:

AUTO - Auto

⚡ - Fill

⏏ - Off

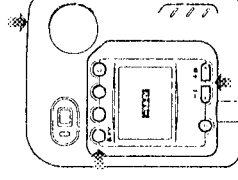


EV Compensation

The Exposure Value (EV) system is a method of stating exposure settings by means of a single number instead of the traditional f-stops and shutter speeds. All combinations of lens openings and shutter speeds that give the same exposure are represented by a single number.

This digital camera will automatically choose the most appropriate EV value for a given situation. However, the EV value can also be manually compensated as follows:

1. Make sure the camera is in Record mode.
2. Press the Multiple display/EV button (located at the top left corner of the LCD display on the back of the camera) to bring up the EV Compensation menu.
3. Use the Forward or Backward button to choose the desired field, and press the Shutter release button to increase the value of that field.



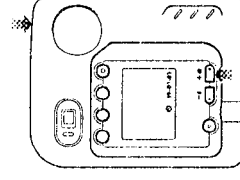
The effective EV Compensation range of this digital camera is from -2EV to +2EV in 0.5 EV steps.

Increasing the EV Compensation value will result in the picture being more exposed (i.e., brighter). Decreasing the EV Compensation value will result in the picture being less exposed (i.e., darker).

Using the Self-Timer

The Self-Timer creates a 10-second delay between the time you press the Shutter release button and the time the picture is taken. You can activate the

Self-Timer by pressing the Forward/Self-Timer button while the camera is in Record mode. The 10-second delay is marked by the Self-Timer LED flashing once per second for seven seconds, then twice per second for the last three seconds.



Memory Full

Once your camera's memory is full, you must remove pictures from memory before capturing new ones. To save pictures, transfer them from the camera to your computer.

When your camera's memory is full, the green memory light will flash every one second, and the LCD display will show a NO SPACE message.

Connecting to Your Computer

For RS232 interface:

1. Plug one end of the serial cable into the COM port on a PC . These ports are located at the back of your computer.
2. Connect the other end of the serial cable to the camera.
3. Turn on your camera.



PC

For USB interface (Optional, for PC only):

1. Plug one end of the USB cable into the USB port.
2. Connect the other end of the USB cable to the camera.
3. Turn on your camera.



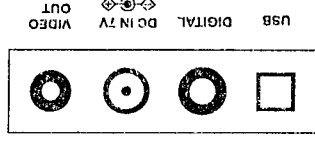
The Output Interface

This digital camera is capable of two types of output: to video, or to a personal computer. On the side of the camera are four ports:

Video Output, Power Supply, Digital Output and USB port.

The video output connector allows you transmit stored images or live video to a standard television set. When the LCD monitor is off, the camera cannot output via this port.

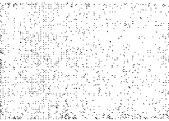
To transmit stored images to your television or VCR, simply attach one end of a video line to the Video Output port of the digital camera, and the other end to the video-in port on the television or VCR.



To download images to your computer, attach one end of the supplied connector cable to the Digital Output port (or USB port) of the digital camera, and the other end of the cable to the back of your computer. Once both ends are properly attached, use the included TWAIN capture driver to capture the images stored in the camera's memory to your computer's hard disk. Once on your hard drive you can print out the images, or edit them using image editing software.

The camera's RS232 interface can be set to transmit data at varying baud rates, depending upon the capabilities of your computer.

If the camera, while attached to your computer, remains inactive for a period of time greater than the Auto Power Off interval, it shuts down automatically.



Installing capture software

The appropriate capture drivers and software are required in order to download images from the digital camera to your computer.

To install the capture software:

1. Insert the CD-ROM disc into your CD-ROM drive.
2. If you are running Windows 95 or Windows 98, select the Run command from the Start menu. When the Run dialog box opens, type E:\setup in the entry line and click OK, where E is the drive letter of your CD-ROM drive. If you are on a Macintosh, double-click the installer icon.
3. The setup program begins, simply follow the on-screen instructions to complete the installation.

Appendix 1: LCD Icons

Here is a list of all the icons that may appear in the LCD display or LCD panel, and what they mean.

LCD panel Icon Specification

- Fill Flash
- No Flash
- Auto
- Full Battery power
- Low Battery Power
- No Power
- Super Fine quality mode
- Fine Quality mode
- Normal Quality mode
- Pictures remain

Menu Icon Specification

- Copy images in Flash memory to CF card.
- Erase All images from Camera storage.
- Erase one image from Camera storage.
- Set Time and Date to system.
- Set the 'Auto ShutOff' interval.
- Auto Play
- Manual Play
- Auto White Balance
- Bright Sun Preset balance
- Lamp Preset balance
- Fluorescent Preset balance
- Cloudy Preset balance
- VGA(640x480) mode
- XGA(1024x768) mode
- Information icon on
- Information icon off
- Format Memory
- Exit Menu screen

Information Icon Specification

- Self Timer on
- Flash used
- No Flash used
- VGA Resolution
- XGA Resolution
- Super Fine quality
- Fine quality
- Normal quality
- Save to Internal flash
- Save to Compact flash
- Ac adaptor power in

Appendix 2: Digital Camera Specifications

Image Sensor: 1/3" CCD, with 1034 x 779 pixels
 LCD Display: 1.8" color display with 30 image/sec for movie-like display
 Image Resolution: 1024 x 768 or 640 x 480 pixels (Optical with 992 x 760)
 Color: 24-bit (16.7 million colors)
 Memory: 4MB internal flash memory
 Storage:

XGA			VGA		
Super Fine	Fine	Normal	Super Fine	Fine	Normal
12	25	50	20	40	80

Lens: Normal: 55cm - infinity,
 Macro: 20-50cm
 White Balance Auto: Preset (Day Light; Cloudy; Sky/Shade; Lamp Lighting;
 Fluorescent Lighting)
 Built-in Flash: Automatic, Fill, Off
 Shutter Speed: 1/10 - 1/10000 sec (Auto)
 Connectors: AC adaptor, RS232 serial port, NTSC or PAL video output
 port, USB (Optional)
 Weight: < 250g (without batteries)
 Dimensions: 106.5(H) x 84.5(W) x 45.0mm
 Additional: Compact Flash memory card slot
**Design and specifications are subject to change without notice.*

Appendix 3 :

Specification and Operation of FotoPrint 800

This camera comes with an optional device for images direct printing without connecting any computer. Via connecting with the digital camera and the compatible printers, this device allows you to take a photo and print out immediately at fine photo quality just the same as what you can print from computer. No more hassle of using PC; no more need of developing film, just one single touch and get the photo.

Specifications

Picture selection : Forward and backward selection by using + and - keys
 Printout mode : print single picture, print all pictures, print copies
 Printout size : 2"x1.5" or 5.2"x3.8"* , regular or mirror both size
 LED indicators : POWER, PRINTER, PROCESSING LEDs
 Supported printers : HP PCL/5, Epson ESC/P2, or Canon BJC compatible printers
 Supported DSC : Listed digital camera only
 Dimension : (W)73 x (L)95 x (H)37mm
 Weight : 155g

**The printout sizes may vary from different printers.
 **Design and specifications are subject to change without notice.*