



DATA SAVER DS-100

E INSTRUCTION MANUAL

Set Up

**Data
Memory**

**Data
Retrieval**

Appendix

Printed in Japan
9222-8793-10 P-A008

For Proper And Safe Use

Read and understand all warnings before using this product.



Use caution, accidents may occur when using this product near young children.



This mark on this product certifies that it meets the requirements of the EU (European Union) concerning interference causing equipment regulations. CE stands for Conformité Européenne (European Conformity).

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Set Up

Designed for the Maxxum/Dynax 7 Series, the Data Saver DS-100 makes it possible to record photographic data for each exposure to a SmartMedia™ card. The data from as many as 400 36-exposure rolls of film can be saved to a single 4MB card.

The data number, printed on the “0” frame, is used to match the stored photographic data to the corresponding roll of film

Data collected by the Data Saver DS-100 can be displayed on the camera’s display or compiled to a list and displayed on your PC.

- SmartMedia™ is a trademark of the Toshiba Corporation.
- Windows®, Microsoft®, and Microsoft Excel® are registered trademarks of the Microsoft Corporation.
- Other corporate and product names are the trademarks and registered trademarks of their respective companies.

SmartMedia Caution

SmartMedia is a precision electrical storage device. If not carefully treated, the recorded data may be damaged or destroyed. Please use caution when using and handling this item.

Minolta is not responsible for any losses if:

- User or other persons mishandle the SmartMedia.
- Card is exposed to an electrical shock and/or static electricity.
- The card is removed from the DS-100 while data is being written or formatted.
- The card has not used for a long time.
- Card exceeds its recommended product life.

Important data should be saved on a back-up disk.

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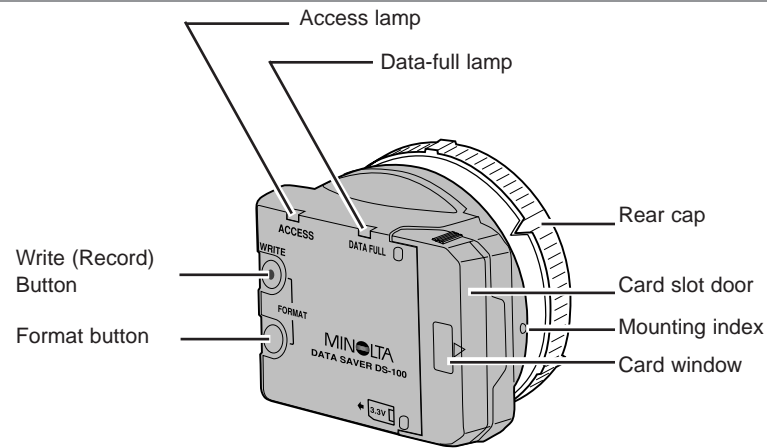
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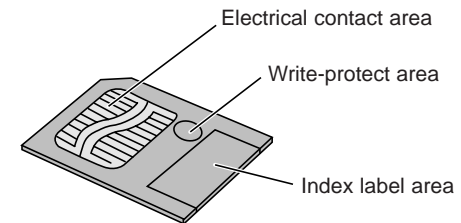
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Names of Parts



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The 4MB 3.3V SmartMedia card provided with the Data Saver DS-100 has already been properly formatted for use with the DS-100. See page 14 to format cards not included with this unit.

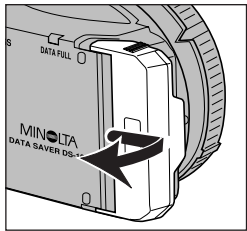


- The Data Saver DS-100 uses only 3.3v SmartMedia. You can not use 5.5v SmartMedia.
- 64Mb or larger SmartMedia can not be used with the DS-100.

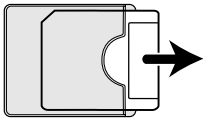
E9

Inserting the SmartMedia Card

The 4MB 3.3V SmartMedia card provided has already been properly formatted for use with the DS-100. See page 14 to format cards not included with this unit.

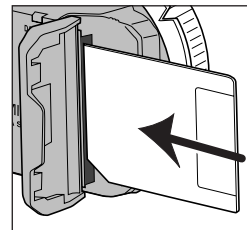


1. Open the card-slot door.



2. Remove the card from its anti-static case.

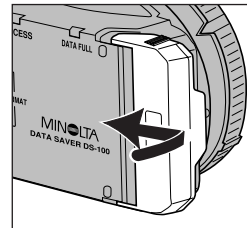
- Don't touch the card's contacts.
- Save the anti-static case for future storage of the SmartMedia card.



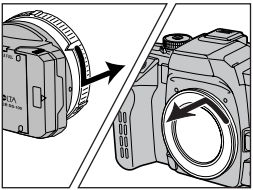
3. Insert the card into the card slot, contact-side down.



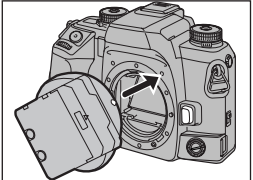
4. Close the card-slot door.



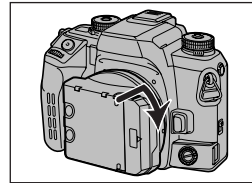
Attaching to the Camera



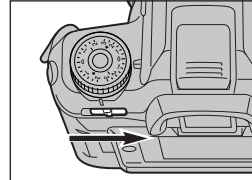
1. Remove the body and rear caps.



2. Turn the camera switch to OFF and align the red mounting dots on the Data Saver DS-100 and camera body.



3. Gently insert the Data Saver DS-100 into the mount, then turn it clockwise until it clicks into the locked position.



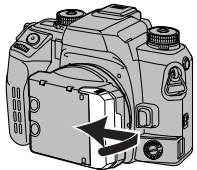
4. Slide the main switch to ON.

Formatting a SmartMedia Card

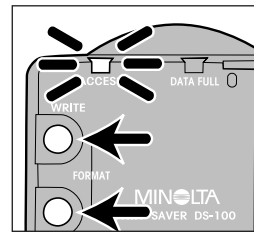
The 4MB, 3.3V SmartMedia card provided with the Data Saver DS-100 has already been properly formatted for use with the Data Saver DS-100. See below to format cards not included with this unit.

Minolta's Image Memory Card RM-2S/RM-4S is not usable with the DS-100 since it requires 5.5v.

See page 42 for explanation of SmartMedia cards.



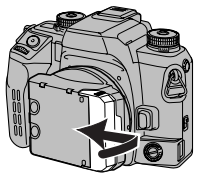
1. To format a SmartMedia card, insert the card into the card slot.



2. Simultaneously push the **FORMAT** and the **WRITE** buttons until the **ACCESS lamp (green) starts to blink.**

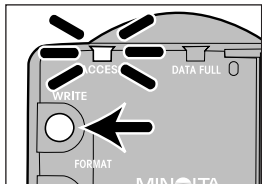
- If the SmartMedia card is not formatted, the ACCESS lamp (red) and the DATA-FULL lamp (yellow) will blink rapidly. Keep pressing the FORMAT and WRITE buttons until the ACCESS lamp changes to green and blinks slowly.
- When a card is formatted, all the previous data stored on the card will be lost.
- When the green ACCESS lamp stops blinking, formatting is complete.

Saving Photographic Data to SmartMedia



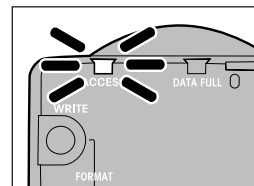
The Maxxum/Dynax 7 camera can store up to 7 rolls of films' photographic data.

- 1. Insert the card into the card slot and close the door.**



- 2. Press the WRITE button until the green ACCESS lamp starts to blink.**

- The Data Saver DS-100 takes the data from the camera and stores it onto the SmartMedia card.
- When the DATA FULL lamp blinks (yellow), the card does not have enough capacity. To overwrite stored data, refer to page 18.

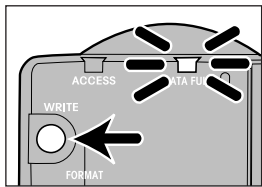


When data is being recorded, the ACCESS lamp (green) will blink.

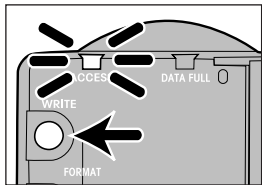
- The Data Saver DS-100 takes the data from the camera and stores it onto the SmartMedia card. So even if the same data is on the card, it will be overwritten.
- The data recording time depends on the capacity of the card.
- Do not remove the card while data is being recorded.

Capacity of card	Maximum recording time for 7 rolls of film (approximate)
2MB	27 seconds
4MB	41
8MB	42
16MB	73
32MB	74

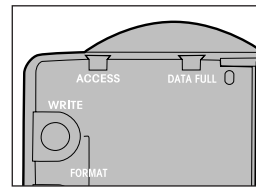
Overwriting Photographic Data to SmartMedia



When the DATA-FULL lamp (yellow) blinks, the card doesn't have enough memory available to store the data.



1. If you want to overwrite data stored on a card, keep pressing the WRITE button (for more than 3 seconds) until the green ACCESS lamp starts to blink.
- If data is overwritten to a card which doesn't have enough room, the oldest data will be overwritten first.



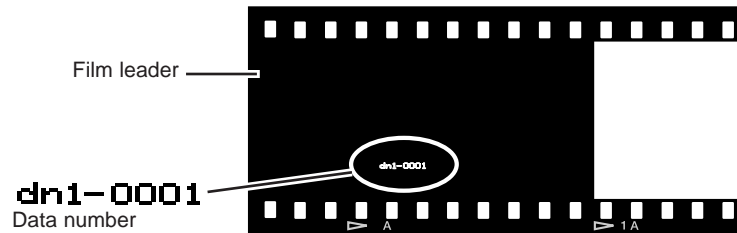
- The ACCESS lamp stops blinking when overwriting is finished.

Recalling Photographic Data to the Camera Display

FILM DATA NUMBER

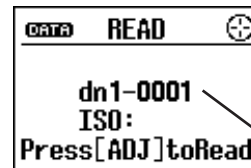
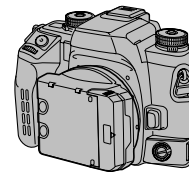
In order to identify the photographic data with the developed film, the data number is exposed on the "0" frame when the film cartridge is loaded into the camera (providing data memory has been selected). Each time another roll of film is loaded, the data number increases by 1.

- For more information on data numbers, refer to your camera's manual.



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Photographic data stored in the SmartMedia cards, can be displayed on your camera's display.



Data number

1. Attach the Data Saver DS-100 to the camera and slide the main switch to ON.

- The ACCESS lamp (green) will come on in approximately 8 seconds.
- When the DS-100 has a defective SmartMedia, the ACCESS lamp will be red and the Data Full lamp (yellow) will blink rapidly. When this happens, data cannot be displayed.

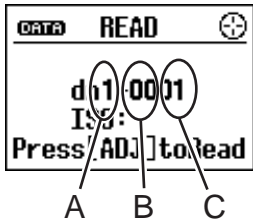
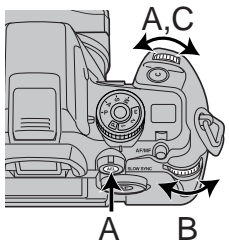
2. Follow the camera's instructions and recall the data.

- For the Maxxum/Dynax 7, press the DATA button on the control panel.
- The method of displaying the data may differ, depending on the camera.

Data Retrieval

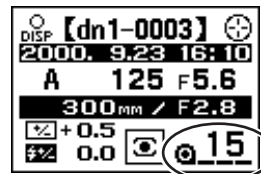
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Recalling Photographic Data to the Camera Display



3. Turn the front or rear control dial to select the data number.

- The following procedure is for the Maxxum/Dynax 7 camera. For other cameras, refer to their cameras' manuals.
- A. By turning the front dial while pressing the AEL button, you can select dn1-9.
- B. Turn the rear dial to move the data numbers by 100.
- C. Turn the front dial to change the data number by 1 each time.
- Film speed will appear whenever a film area is selected that contains photographic data.



4. Follow the camera's instructions and recall the data.

- For the Maxxum/Dynax 7, press the ADJ button on the control panel.
- The first frame's data will appear.

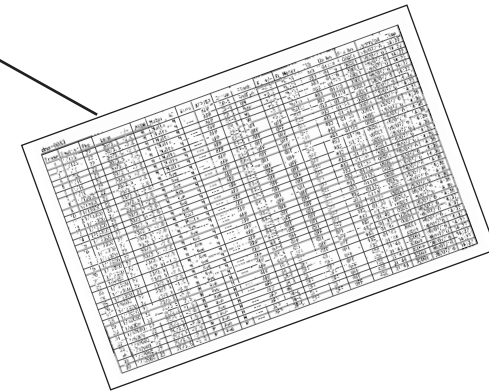
5. Select the desired frame whose data you wish to view.

- For the Maxxum/Dynax 7, slowly turn the front or rear control dial. For other cameras, refer to their camera's manual.
- If the front or rear control dials are moved too quickly, incorrect data may be displayed.

Retrieving the Photographic Data to a PC

Using a general adapter, the photographic data recorded on the SmartMedia card can be retrieved and compiled on a PC. With a spreadsheet application (such as Microsoft Excel), the data can then be printed out in a list.

Sample print out

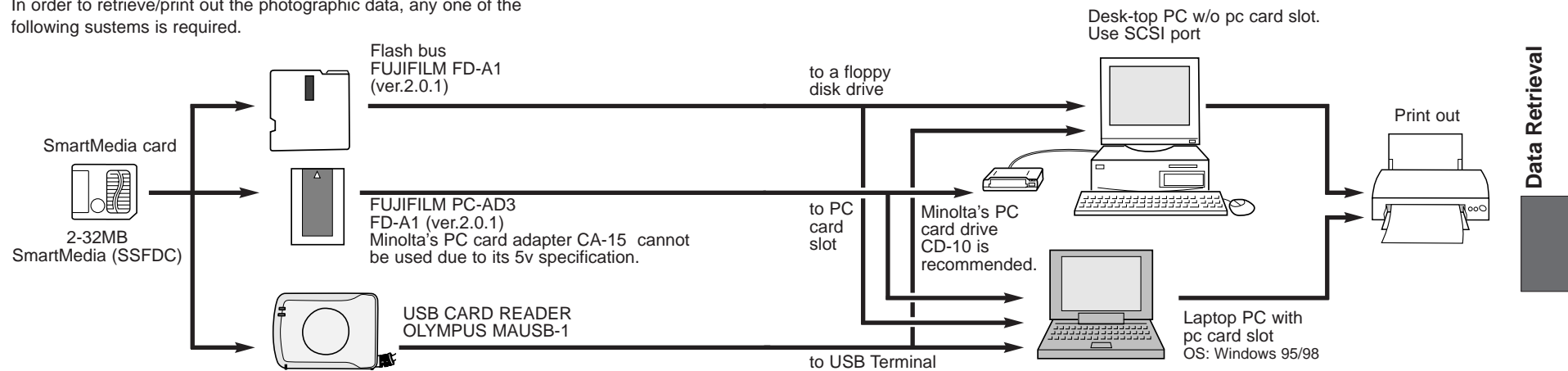


The image shows a sample print out of a spreadsheet, likely Microsoft Excel, containing a large amount of data. The data is organized into columns and rows, with a header row at the top. The text is too small to read, but it appears to be a list of photographic metadata or similar data points.

Data Retrieval

System Requirements

In order to retrieve/print out the photographic data, any one of the following systems is required.



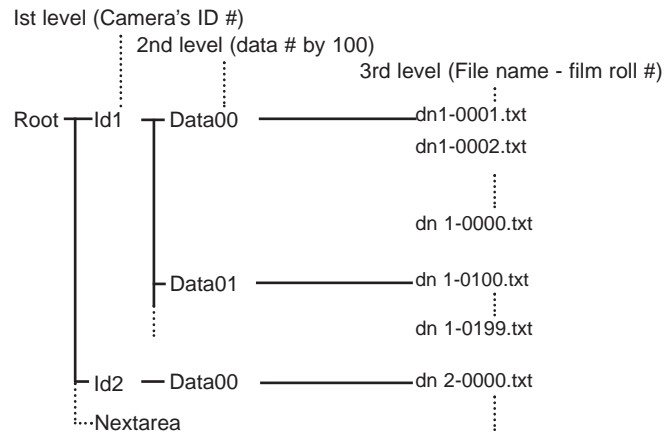
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Data Retrieval

Folder and File Structure

SmartMedia File Structure



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- 8MB and 16MB SmartMedia cards have a capacity for 9 folders (Fdata01-09). 32MB cards can hold 19 folders (Fdata01-19). Each folder contains photographic data for 100 rolls of film.
- Do not delete the file named Nextarea. This file contains necessary operational instructions for the SmartMedia.
- All files are written in DOS Txt format.

Use only the DS-100 to overwrite or delete data from the SmartMedia card. It is not possible to do this using your PC without causing damage to the data. If you want to delete data on the SmartMedia card, refer to page 14 on how to format. However, once stored in your PC, the photographic data can be manipulate using a spread sheet. See page 30.

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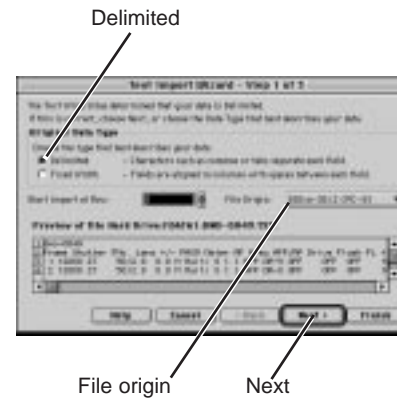
Opening the Data

Using Spreadsheet Software

This manual uses Microsoft Excel as an example of using a spread sheet.

- Other spreadsheet software may be different and require different steps.
- If you don't have any spreadsheet software, refer to page 34.

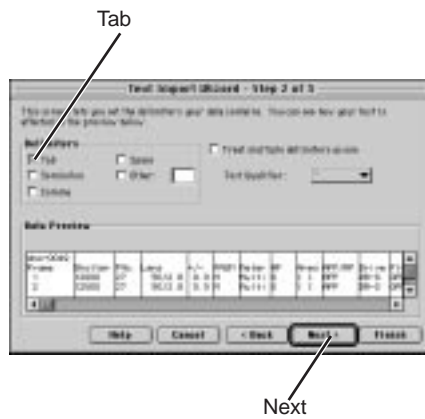
1. **Connect the SmartMedia card to the PC using any of the methods shown on page 26-27.**
2. **Start the Excel program.**



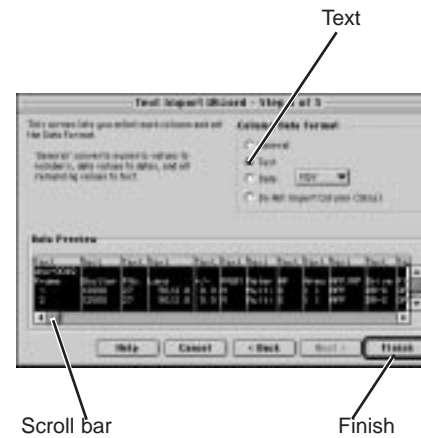
3. **From file, open and select the SmartMedia file. The window at the left will appear.**

- Choose the **Delimited** setting shown in the figure at the left and then click on **Next**.
- Details of window may be different, depending on the software version in use.
- If you cannot locate the exact file you want, select **All files** from the options in the **File Origin** drop-down menu.

Opening the Data



3. Select Tab and then click on Next.



4. Select all the data, and click on Text.
5. Click on Finish.
 - The photographic data layout is dependent on the spreadsheet software used.
 - You can underline data, print, or save as desired.
 - Refer to your spreadsheet's instruction manual for information on how to manipulate the data.

Opening The Data

Viewing data without spreadsheet software

1. **Connect the SmartMedia card to the PC using any of the methods shown on page 26-27.**
2. **Select the drive containing the SmartMedia card file and choose the desired file.**
3. **Double click on the file.**
 - If the file doesn't automatically open, it may be necessary to first open the text software.
4. **The photographic data will appear.**

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After Data is Displayed

Photographic data is shown on page 33.

- You can underline data, print, or save as desired.

Data Retrieval

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Photographic Data which can be Saved

The photographic data shown below can be displayed on the camera or transferred to a PC .

Item	Output device	Camera Display (eg:Maxxum/Dynax7)	Data output to PC
Body ID number		dn1-0003	dnx
Photographic Data Number		dn1-0003	-xxxx
Film Speed		ISO: 400	ISO:xxx
Frame Number		15	Frame
Shutter Speed		125 F5.6	Shutter
Aperture		125 F5.6	FNo.

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Item	Output device	Camera Display (eg:Maxxum/Dynax7)	Data output to PC
Lens focal length and max f-no.		300mm / F2.8	Lens
Exposure Compensation (including exposure bracketing)		+0.5	+/-
Exposure mode		A	PASM
Flash exposure mode		[C]	Meter
Flash exposure compensation (including flash bracketing)		0.0	FL+/-
Date of picture		2000. 9.23 16:10	yy/mm/dd
Time of picture (hour and minute)		2000. 9.23 16:10	Time

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Care and Storage

Operating Temperature and Conditions

- This product is designed for use from -20 to 50 °C (4 to 122 °F).
- Never leave it where it may be subjected to extreme temperatures such as in the glove compartment of a car.
- To prevent condensation from forming, place the product in a sealed plastic bag when bringing it from cold environment to a warm environment. Allow it to come to room temperature before removing it from the bag.



Saving Important Data

- Check the product's function carefully, before saving important data.
- Minolta is not responsible for any loss that may occur due to an equipment malfunction.

Others

- This product is not waterproof or splashproof. When using the product in the rain, it should be protected.
- Do not drop or subject this product to impact. Damage may result.
- If a SmartMedia card is stuck in the Data Saver DS-100, do not use force to remove it. Contact an authorized Minolta Service Facility.
- If the product is dirty, wipe it gently with a soft, clean, dry cloth. If it comes in contact with sand, gently blow away loose particles - wiping may scratch the surface.

Storage

- Store in a cool, dry, and well-ventilated area away from dust and chemicals such as moth balls. For long periods, place the product in an airtight container with a silica gel drying agent.

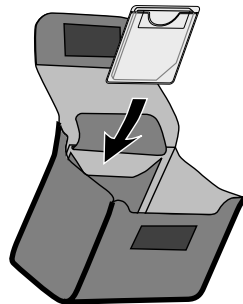
SmartMedia Notes

Proper Handling

- Never use organic solvents to clean the product.
- When carrying or storing SmartMedia, keep it inside an anti-static case. The DS-100 case has a pocket which holds a SmartMedia card with an anti-static case.

Questions and Service

- If you have questions about this product, contact your local camera dealer or write to the Minolta distributor in your area.
- Before shipping your product for repair, please contact an authorized Minolta Service Facility for details.



- When necessary, gently wipe the card clean with a soft, clean, dry cloth.
- Use only the index labels provided with the SmartMedia. .
- To write protect the card, place the write-protection seal over the card's write-protect area.
 - Be sure to affix the seal within the write-protect area so the seal lays flat (no bubbles or raised edges).
 - The DS-100 cannot write or delete data when the write protection seal is placed over the write protect area.
 - Data can be read by your PC when the write protection seal is placed over the write protect area.
 - Remove the seal to cancel write-protect.
 - Write-protect may not work if the seal is dirty. Clean the seal with a soft, clean, dry cloth.

SmartMedia (SSFDC)

Care in Handling the SmartMedia

- The SmartMedia is a precision electrical storage device. Handle accordingly.
- The card should not be exposed to an electrical shock and/or static electricity.
- Do not bend, drop, or subject the card to impact.

The Data Saver DS-100 uses only 3.3v SmartMedia. You can not use 5.5v SmartMedia.

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The following SmartMedia cards are usable:

Smart media size	Memory Capacity
2MB	400 Rolls (36 exposures)
4MB	400 Rolls (36 exposures)
8MB	900 Rolls (36 exposures)
16MB	900 Rolls (36 exposures)
32MB	1900 Rolls (36 exposures)

- The larger the capacity of the card, the longer the time required for recording and formatting.
- Due to the cluster layout of the SmartMedia cards, 2MB and 4MB cards have the same capacity. This is also true for the 8MB and 16MB cards.

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Display Information

When using the WRITE and FORMAT buttons, they must be pressed for a minimum of 3 seconds for the signals to be processed properly.

Display	Explanation	Action	Page
When camera main switch is turned on, the ACCESS lamp (green) is on for 5 seconds.	The DS-100 is successfully connected to the camera.		13
ACCESS lamp (green) blinks.	Writing data	Do not remove the SmartMedia card from the DS-100 while saving data.	16
DATA FULL lamp (yellow) - blinks	Card does not have enough capacity to hold the data.	<ul style="list-style-type: none"> • Replace card • Overwrite by pressing WRITE button until ACCESS lamp turns green. 	18

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Display	Explanation	Action	Page
ACCESS (red) and DATA FULL (yellow) lamps blink slowly.	SmartMedia card is not properly formatted.	Simultaneously press the FORMAT and WRITE buttons.	14
ACCESS (red) and DATA FULL (yellow) lamps blink rapidly.	<ul style="list-style-type: none"> • No card in DS-100 • The write protect seal is on the card. • The SmartMedia card does not meet the required specifications. 	<ul style="list-style-type: none"> • Insert card into DS-100 • Remove the write protect seal • Insert a correct (3.3v) card into the DS-100. 	11
Lamps do not illuminate.	Remove the DS-100 from the camera and re-attach. If problem persist, contact an authorized Minolta Service Facility.		12

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Specifications

Type:	Photographic Data Saver
Data Memory:	SmartMedia (3.3V type)
File Format:	Minolta Data Saver DS-100 optimized file format
File Type:	Plain text
Data Memory Items:	Data number (one number per exposure, including the camera ID number), Year/ month/ day, hour/ minute, Shutter speed, Aperture, Focal length, Smallest f- number, Exposure mode, Exposure compensation (exposure bracket included), Metering mode, Flash compensation (including flash bracketing increment), Film speed (one per roll of film)

Operating Temperatures:	0 to 50 °C (32 to 122° F)
Size:	65.5 x 35 x 65 mm (WxHxD)
Weight:	55g (w/o cap and case)

Specifications are based on the latest information available at the time of printing and are subject to change without notice.

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Minolta Austria Ges. m.b.H.	Amalienstrasse 59-61, A-1131 Wien, Austria
Minolta Camera Benelux B.V.	Zonnebaan 39, P.O. Box 6000, NL-3600 HA Maarssen, The Netherlands
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