

USER GUIDE

CUTIE PHOTO STORAGE



DSR-281

Sarotech Co., Ltd.

www.sarotech.com

CONTENTS

1. Cautions and Requests for Safety (For safe use)	3
2. Package contents	4
3. The part name of DSR-281	4
4. How to assemble DSR-281	5
5. Rechargeable Battery	6
6. Functions of Each Button	7
7. Operation Mode of Device	8
8. Turn on/off Power	9
9. Main Menu	10
10. Installation of Software Driver	15
11. Reference and Precaution	20
12. Specifications	22

1. Cautions and Requests for Safety(For safe use)

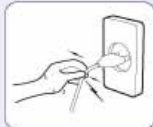


1. You should connect a provided power adaptor to Cutie if your system doesn't provide sufficient power to spin up the portable hard disk drive (HDD).
2. Please connect the USB cable first and then turn the power on. Otherwise, the DSR-281 can not be detected on your PC.

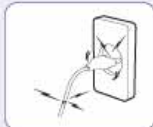
- ※ Please read a user guide before using the DSR-281.
- ※ Please keep these instructions because it includes crucial matters for safety.
- ※ Symbols and their meanings are as the following.



Warning : Wrong handling could cause death or serious injury.
Caution : Wrong handling could cause injury or physical damage.

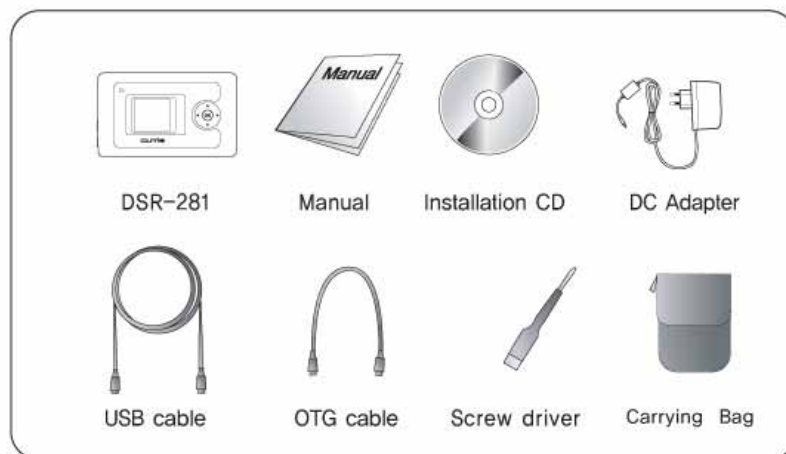


Do not pull out the code part or do not touch the power plug with wet hands.
※ Danger of electric shock • fire



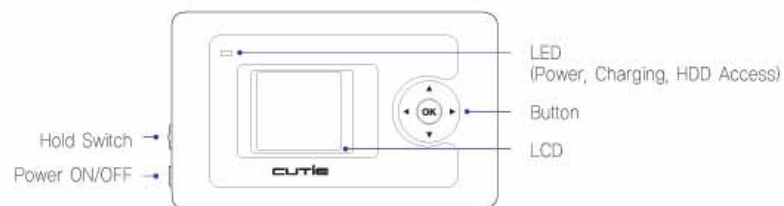
Do not use damaged power codes or plugs, and loose wall outlets.
※ Danger of electric shock • fire

2. Package contents



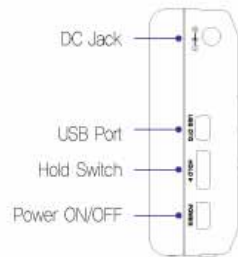
3. The part name of DSR-281

Body



- 1) LED : It indicates power status, charging and HDD access.
- 2) Button : It is used to select or change the operation.
- 3) LCD : It indicates the status of operation.

■ Left side of body



- 1) DC Jack : Connect a provided power adaptor.
- 2) USB Port : Connect USB cable or OTG cable.
- 3) HOLD : Switch to stop any buttons being pressed inadvertently.
- 4) Power ON/OFF : It is used to turn on/off the power.

*** 4. How to assemble DSR-281 ***

■ How to assemble HDD

- 1) Separate the screw from the body.
- 2) Separate the lower case from the body.



- 3) Connect the HDD to 44 pin connector of PCB.



Those 4 pins off to the side are for master/slave setting. Please leave them.

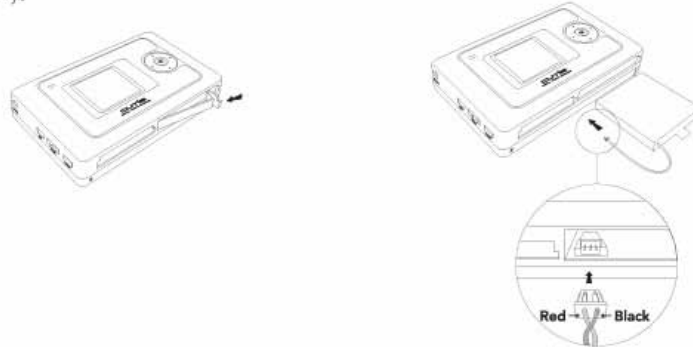


- 4) Put the fixture into the body and assemble the lower case to the body.
- 5) Assemble 2 screws as shown below:



■ How to replace batteries

- 1) Open the battery lid on the side of body.
- 2) Separate the battery from the body.



- 3) Connect a new battery to the body. Please be careful not to switch power lines (red and black).
- 4) Assemble the battery lid to the body.



■ 5. Rechargeable Battery ■

■ 5.1 LCD Display to Indicate Battery Level

The Built-In rechargeable battery allows you to use DSR-281 without external battery pack when you are out for business or a trip. The battery status is displayed on the right upper side of LCD when the power is on.



As the battery level is displayed with 4 levels, you should charge it before all the 4 levels are empty. When the battery is empty the buzzer will sound every 3 seconds.

If you keep using it, the power will automatically turn off with a warning message on LCD. In this case, you shall not turn it on again, and please charge it or connect the provided power adaptor.

If you excessively keep using it, the battery may be damaged. Please be careful.

■ 5.2 How to Charge it

There are two ways to charge rechargeable battery. You can connect a provided DC adaptor to DSR-281, or you can connect the DSR-281 to USB port on your PC after turning it off.

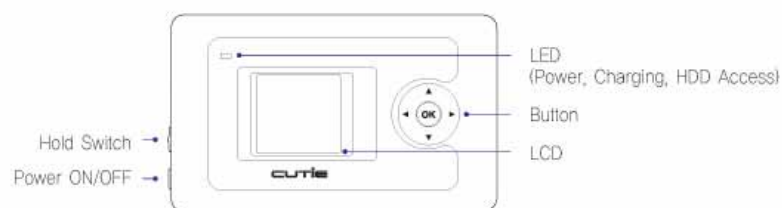
5.2.1 Connection of DC Adaptor

Once you connect the DC adaptor to "DC IN" jack on DSR-281, it will be charged.

5.2.2 Connection of USB Port

When you connect the DSR-281 to USB port, it can be charged only when the device is turned off. The battery can be charged from USB port but, it doesn't mostly get charged. In this case, the battery would be rather used as auxiliary power because the standard USB port is not sufficient to spin up the portable HDD. Please do not get this wrong because the green (charging) LED is always on when you connect the DSR-281 to USB port.

*** 6. Functions of Each Button ***



[POWER] : Press "Power" button for over 3 sec. to turn the power on/off.

[OK] : Press "OK" button to select the submenu or copy/delete the file/folder.

- [↑] : Move to the upper part of files/folders in "Browse" or move to the upper part of menu.
- [↓] : Move to the lower part of menu or move to the lower part of files/folders in "Browse".
- [←] : Cancel the operation or move to the upper menu or folder in "Browse".
- [→] : Enter the selected folder (Move to the lower folder)
- [HOLD] : The button will not operate when the HOLD switch is on.
(Prevention of wrong operation)

*** 7. Operation Mode of Device ***

DSR-281 has 3 operation modes named as independent mode, OTG mode and PC connection mode. These three modes will be converted depends on a connected device to USB port on the DSR-281. In independent mode, it is automatically converted according to the connection status of USB connector, except the process of backup, copying or deleting. If the device is in the process, it will be converted after completing the process.

■ 7.1 Independent Mode

It means that nothing is connected to USB port. It can perform an Auto Backup using the built-in card reader, or manage files/folders in HDD or cards using browser. In case you convert into the independent mode from other mode, it moves to the main menu.

■ 7.2 OTG Mode

It means that the USB device supported by DSR-281 is connected to USB port. In this case, the built-in card reader will stop the operation, and you can only use connected USB device and fixed HDD. It is all the same as "Independent Mode" except connecting with USB device instead of card reader. If you disconnect the USB device from USB port, it will be converted to independent mode. In case you convert into OTG mode from the independent mode, it moves to the main menu.

■ 7.3 PC Connection Mode

It means that the DSR-281 is connected to USB port on PC. In this case, PC has the control right, and the DSR-281 operates as the external card reader and portable HDD. During the connection, the following display will be shown, and LCD backlight will be off to save the power. If needed, you can press any key, and the backlight will be ON again. If you disconnect the DSR-281 from PC, it will be converted to the independent mode.



*** 8. Turn on/off Power ***

If you press the power button for over 3 sec., it will be turned on with the following display. You shall keep pressing it until it shows the following display. If you stop pressing it before the display, it doesn't get turned on.



If [HOLD] switch is on, it displays as the following and doesn't get turned on.



If you press the power button for over 3 sec., it displays as the following and gets turned off.



If you press the power button during backup or copying, it is automatically cancelled and the power gets off, however, in case of during deleting or PC connection mode, please be careful. In case of during deleting, please wait until the operation is done, and in case of PC connection mode, please safely disconnect the DSR-281 from PC and turn the power off. If you turn it off by force without doing as the above, data may be damaged unexpectedly.

9. Main Menu

It is an initial menu in Independent mode or OTG mode, and the organization is as the following.

- Auto Backup : Copy all files and folders in card reader or connected USB devices in OTG mode
- Browse : Check, copy and delete files of hard disc, card reader or USB device
- Setup : Set a system environment such as language, user number, auto shutdown and etc.

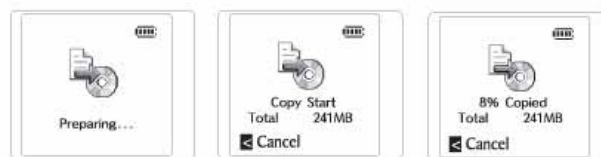


9.1 Auto Backup

If you select "Auto Backup" in the main menu, it connects a fixed HDD to card reader or USB device with the message "connecting...". After this process, it will ask you for confirmation as following.



If you select the "Yes", it prepares for backup and proceeds to backup with the following display. During backup, LCD backlight will be off to save the power. If needed, please press any button (except [-] button), and then the backlight will be on again. If you press [-] button, the operation will be cancelled. Please be careful.



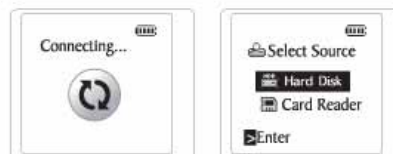
If backup proceeded, the folder for each drive of cards and USB device will be created in HDD. The folder will be named with type of DSRxxxx, and xxxx and it will be saved as 00001, 00002, 00003... The first figure is the user's number specified in setup menu. If the same folder is in fixed hard disc, it skips that folder and goes for the higher value (number).

If you don't change contents of hard disc between auto backup and the next auto backup, the highest number among the folder's name is the latest backup folder. But if you delete a folder in between, that folder will be created first when the next backup is done. In this case the order may be changed. Please be careful.

When the backup is completed, it moves back to the main menu. If you want to cancel the operation during backup, press [—] button. If you want to delete copied files, you shall go to the "Browse" and delete them because they are in hard disc.

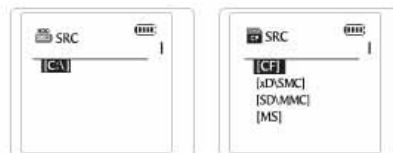
■ 9.2 Browse

If you select the "Browse" in main menu, it will access to a fixed hard disc, card reader or USB device with the message "connecting...". And then, the following menu will be shown. And you can select a device that you want to browse. If it connects with USB device, <Hard Disk> and <USB disc> will be displayed, but if not, <Hard Disc> and <Card Reader> will be displayed.

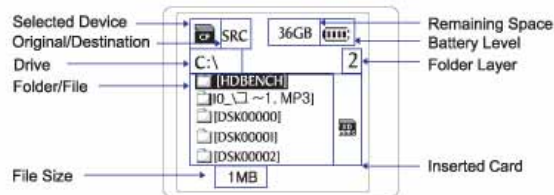


If you select a drive you want to browse, the following display will be shown according to drives concerned.

The left picture is a list of fixed hard disc partition, and the right one is a list of card.



In case of hard disc, it starts from C:\ according to the number of partitions and arrange them in the order of D:\, E:\ and etc. In case of card reader, the name of each card is arranged, in the order of USB_1, USB_2, USB_3 for USB drive. If you select a drive or card or USB drive, it will be shown as below.



Parts of "Browse" are as the following.

[Selected Device] : Type of devices or cards being browsed

[Original/Destination] : If you browse an original, it displays "Src", and if it is a destination where you want to save a file/folder, it displays "Dest".

[Remaining Space] : Remaining space of device

[Battery Level] : Status of rechargeable battery

[Drive] : It shows a drive being browsed

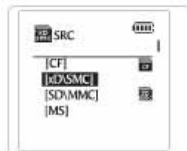
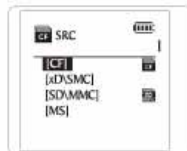
[Folder/File] : It shows a list of folder/file being browsed

[Folder Layer] : It indicates folder layer being explored. The root folder is "1", and as it goes to the lower folder, it grows 1.

[File Size] : The size of highlighted file

[Inserted Card] : It shows an inserted card.


It is also displayed during backup or copying.



Press [↑] or [↓] button in order to select the file or folder in browser. When you move to the upper folder, press [←] button, and if you move to the lower folder, move the cursor to the concerned folder and press [→] button.



If you want to copy or delete the highlighted file or folder, press [OK] button, then you will get the following display.


 If you press [OK] button on a list of hard disc partition, card or USB disc number, the "Delete" menu will be directly shown without the above menu. If you want to empty memory card or USB disc after backup, you can use this function usefully. But please be careful, because all contents will be erased. If you want to copy all, please use the "Auto Backup" menu.

If you select "Copy", the browser will be shown again, and Src,[Original/Destination] will be changed to "Dest", and it will allow you to select a folder. At this time, you can move to the folder where you want to save and presses [OK] button, copying will be proceeded with display similar to "Auto Backup". (Please refer to "Auto Backup")

If you select "Delete" from copy/delete menu, the following picture will be shown, and it will ask you the confirmation whether you want to delete it or not.



Select "Yes", and press [OK] button to delete it.

 Please be careful, because the deletion can't be cancelled in process.

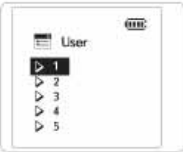


■ 9.3 Setup



9.3.1 User

It is a useful function when many users use a DSR-281 together. If you specify a user number using [↑] or [↓] button and press [OK] button, the number on the ten thousand unit(the first figure)of created folder's name will be saved as a user's number when auto backup is done. For example, if you perform the backup in the condition of the user's number "3", it will create the folder's name in the form of DSR3xxxx. It helps you to distinguish the backup folder from other user's backup folders. You can arrange them by folder name in Windows explorer when you browse them on PC.



9.3.2 Auto Power Off

If you don't press any key for designated time, the power will be off to save the power. If you want to change the time, you can select a value in the menu.

If you mainly use "Auto Backup" and want to turn it off quickly after backup, you can set the shutdown time, and if you often manage files using "browser", you'd better to set the longer time. You can minimize the battery consumption as the time until it gets off automatically after "Auto Backup" is shorter, and it makes a difference for total capacity of backup file before complete electric discharge.



9.3.3 Language

DSR-281 supports various languages. You shall properly select a language in this menu to display languages on menu, browser and etc, and file and folder names in the browser properly. For some languages, the language for menus will be changed as well, however, for the rest languages, menu names will be written in English and file and folder names will be written in the language selected. Most of users don't need to change the language, because it has been already setup in accordance with the country where products are sold when producing them.



9.3.4 HDD Format

It formats a fixed hard disc. Please use this function carefully for the following cases.

- New hard disc (hard disc which hasn't been formatted)
- Hard disc formatted to "not-supported file system" by DSR-281.
(Reference : supported file system – FAT12/16/32)
- If you want to format high capacity HDD to FAT32 with Primary partition
(Caution : Windows 2000/XP user can format below 32GB HDD. We'd like to recommend you to make 2~4 partitions.)
- If you want to delete all contents of fixed hard disc quickly
- If you want to get the best performance in DSR-281 (no problem to use the hard disc formatted on other systems, but it can cause a difference of capability depends on file system)

If you select this menu, it will ask for the confirmation twice. And if you select "Yes", it will start to format a fixed hard disc drive.



If you confirm the "HDD format", you can't cancel the process. Please be careful, because all data in hard disc may be deleted. When the format is completed, one partition for the total capacity of hard disc will be created, and it will be formatted to FAT32. Users who have several partitions shall be careful, because all partition information in hard disc will be deleted as well.

10. Installation of Software Driver

How to install a software driver on PC or Mac.

10.1 The DSR-281 will be automatically recognized on the following OS without software driver installation.

- Windows 2000/XP/2003 or higher
- Mac OS 10.01 or higher
- Linux 2.4 or higher

10.2 Installation of Windows 98(SE) Driver

You need to install a software driver on Windows 98(SE), because it doesn't have a driver for external USB device. Connect the DSR-281 to USB port on your PC using provided USB cable. Once you connect it to PC, it will be converted into PC connection mode, and the following wizard will be shown shortly.



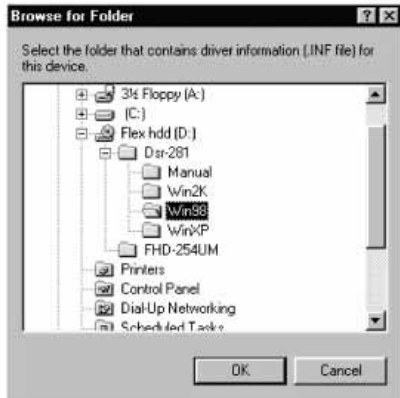
Press <Next> button.



Press <Next> button.



Press <Browse> button.



Specify a directory of driver. You can select the folder of downloaded driver from <http://www.sarotech.com> (or copied from provided software driver CD) and press <OK> button.



Press <Next> button.



Press <Next> button.



Now, "DSR-281 Hard Disk" driver installation has finished successfully. Once you press <Finish> button, the driver of "DSR-281 Card Reader" will be automatically installed.



If you wait for a second, the following wizard will be shown,



Press <Next> button,



If you press <Finish> button, the installation will be completed. Please make sure that the following drives are created in "My Computer" as shown below.



If you insert a memory card into the memory card slot on DSR-281, the color of card icon ("removable disc" icon) will change. In case of inserting CF card, the color of CF icon in Windows browser will change into red.

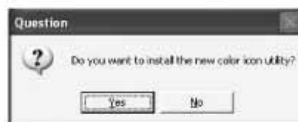
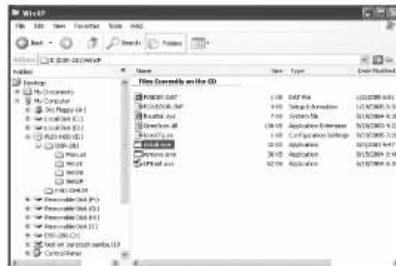
DSR-281 (J:)	Local Disk	37.2 GB	37.2 GB
Devices with Removable Storage			
3 1/2 Floppy (A:)	3 1/2-Inch Floppy Disk		
FLEX HDD (E:)	CD Drive	680 MB	665 MB
EOS_DIGITAL (F:)	Removable Disk		
EM (G:)	Removable Disk		
SD (H:)	Removable Disk		
MS (I:)	Removable Disk		

■ 10.3 Installation of Drive Icon for Windows 2000/XP

The inserted card drives will be displayed same as the following in Windows Explorer regardless of card type on Windows 2000/XP/2003.

DSR-281 (J:)	Local Disk	37.2 GB	37.2 GB
Devices with Removable Storage			
3 1/2 Floppy (A:)	3 1/2-Inch Floppy Disk		
FLEX HDD (E:)	CD Drive	680 MB	665 MB
Removable Disk (F:)	Removable Disk		
Removable Disk (G:)	Removable Disk		
Removable Disk (H:)	Removable Disk		
Removable Disk (I:)	Removable Disk		

The software driver is not needed on Windows 2000/XP/2003, but it provides a separated icon software to classify card types. You don't need to install it but, it helps you to distinguish each card. It is only for better convenience. Please open provided software driver CD in Windows Explorer and open the folder of current OS. This explanation is on the assumption that it is installed on Windows XP.



Double click the "install.exe" file.



Press <Yes> button.

Remove the DSR-281 from USB port on your PC and connect it again. Press <OK> button to finish the installation. You can see drive icons for each card in Windows Explorer.

11. Reference and Precaution

11.1 Automatic Power-off

DSR-281 gets off automatically if there is no user's control for designated time in the setup of automatic power-off for power saving, however, it doesn't get turned off until the operation is done in case of PC connection mode, backup, copying and deleting. Even after the operation is done, it doesn't get turned off right away. If there is no user's control for designated time, it will get turned off.

11.2 Charging

DSR-281 has a rechargeable battery in it. The rechargeable battery is off when connecting with DC adaptor, and it is charged automatically in case of connecting with PC. When connecting with DC adaptor, the charging time can be changed

according to the power on/off. In case of power-off, the time for full charging is the maximum 3 hours according to the condition of rechargeable battery, and in case of connecting with USB, it takes about 6 hours. The device could generate heat during charging, but it is totally normal.

■ 11.3 Precaution for using DC Adaptor

In the condition of power-on, you shouldn't connect or disconnect DC adaptor, because it may cause damage to device. If you disconnect the adaptor during using it, a problem could be generated, because the power could stop momentarily. Please connect or disconnect it in the condition of power-off.

■ 11.4 Precaution when PC Connection Mode

In PC connection mode, the power is provided from PC through USB port, however, a built-in rechargeable battery is used, because some PC doesn't provide enough power. It could get turned off automatically during using it, if DC adaptor is not connected in PC connection mode. If you are using card reader or hard disc on PC, some problem could be generated. Please turn off the power of DSR-281 and connect DC adaptor before connecting with PC.

DSR-281 converts the mode automatically if it connects with PC even in the condition of power-on, however, only hard disc or memory card are recognized according to the condition of PC sometimes. In this case, turn off the power of DSR-281, wait until disconnecting with PC and turn it on again, and it recognizes very well. If it happens often, please turn off the power of DSR-281 before connecting with PC and turn it on after the connection.

■ 11.5 Precaution for using Microdrive (MD)

The power consumption of Microdrive is high compared with other memory cards. Please use it in the condition of connecting with DC adaptor or fully-charged built-in battery if possible. We'd like to recommend you to use CF instead of Microdrive for users in the case they can't use DC adaptor (ex: used outside), because the using time is quite short, even though built-in battery is fully charged.

■ 11.6 High-Speed Memory Card and Hard Disc

If DSR-281 uses high-speed memory card and hard disc, the backup speed and

copying will be improved. Memory cards show their capability in the unit of MB/s or X (double speed, it shows what times of 150KB/s), and please use products having high numerical value. Hard discs usually don't indicate the speed on them, but you can refer to the homepage of manufacturer to select good products.

■ 11.7 Electric Power Consumed of Hard Disc

The biggest power consumption of DSR-281 caused from fixed hard disc. If you use a hard disc having the low consumption of power, you can increase the time of using it and expand the maximum amount of backup. In general, the power consumption of hard disc is shown on the upper part of hard disc in the form of "DC +5V 0.5A". In case of 2.5 inch hard discs, 5V which means the power is all same, however, the current consumption (0.5A) is a little different. As the numerical value is low, the power consumption is low. In case of some HDD models that don't indicate the power consumption on them, you can refer to product information on the homepage of manufacturer.

*** 12. Specifications ***

Model	DSR-281
Supported HDD and Memory card	2.5" IDE HDD Memory card: CF Type I, II, Micro Drive, SD, xD, SMC, MMC, MS, MS Pro, MS-ROM, MS-Magic Gate, MMC II Mini SD, MS Duo, Ms Pro Duo, T-Flash, RS-MMC(with adaptor)
Interface	USB 2.0 (Max. 480Mbps)
Display	Dot matrix LCD 128 x 128, Backlight
Power	5V DC Adaptor, Rechargeable Battery
File System	FAT 12/16/32
OS	Windows 98(SE)/ME/2000/XP/2003 Linux kernel 2.4 or higher, Mac OS 10.01 or higher



Disposal of Old Electrical & Electronic Equipment(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

FCC Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This Device may not cause harmful interface, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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 correct the interference by one or more of the following measures:

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

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.



DSR-281

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