A printing apparatus print an image on a sheet. A control unit performs control, in a case where the sheet is capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using the double-side conveying path. The control unit also performs control, in a case where the sheet is not capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using a one-side conveying path.
FIG. 6

SHEET DISCHARGE CONTROL PROCESS

PRINT ON ONE SURFACE

IS INVERSION NEEDED?

NO

IS PASSING THROUGH DOUBLE-SIDE PATH POSSIBLE?

YES

IS PASSING THROUGH INVERSION PATH POSSIBLE?

NO

DISPLAY ERROR SCREEN

INVERT IN INVERSION PATH

INVERT IN DOUBLE-SIDE PATH

DISCHARGE SHEET

END
PRINTING APPARATUS CAPABLE OF CONVEYING SHEET TO BOOKBINDING DEVICE, CONTROL METHOD OF THE SAME, AND STORAGE MEDIUM

BACKGROUND OF THE INVENTION

[0001] Field of the Invention
[0002] The present invention relates to a printing apparatus, a control method thereof, and a storage medium.
[0003] Description of the Related Art
[0004] There is a technology of not making a user be conscious of a difference in a mechanism of a post-processing device by changing orders of print images in consideration of the mechanism of the post-processing device when performing a center-folding process to a printed matter (for example, see Japanese Laid-Open Patent Publication (Kokai) No. 2005-142609).
[0005] For example, there are a post-processing device of a mechanism that a recording medium (called a “sheet”, hereinafter) discharged first is arranged on an inner side of a printed matter when performing binding, and a post-processing device of a mechanism that a sheet discharged first is arranged on an outer side of a printed matter when performing binding.
[0006] In the case of a face-up printing mechanism of discharging a sheet with a printed surface facing up during single-side printing, in a saddle finisher without a switchback, a printed surface is arranged on an outer side of a printed matter after a center-folding process. On the other hand, in a saddle finisher with a switchback, a printed surface is arranged on an inner side of a printed matter after a center-folding process.
[0007] This will be described specifically using FIG. 7A and FIG. 7B. In FIG. 7A and FIG. 7B, a triangle shown on a sheet 101 indicates a direction of a printed surface of a front cover.
[0008] FIG. 7A is a diagram for describing center-folding printing using a saddle finisher without a switchback.
[0009] In FIG. 7A, a sheet 101 for which printing is performed on one surface is discharged in a face-up manner, and is stacked as indicated by “printing result (saddle sheet discharge, before center-folding)”. Thereafter, as indicated by “printing result (saddle sheet discharge, after center-folding)”, when a center-folding process is carried out, the printed surface is arranged on the outer side of the printed matter.
[0010] On the other hand, FIG. 7B is a diagram for describing center-folding printing using a saddle finisher with a switchback.
[0011] In FIG. 7B, a sheet 201 for which printing is performed on one surface is discharged in a face-up manner, carried in a horizontal direction, then switched back, and stacked as indicated by “printing result (saddle sheet discharge, before center-folding)”. Thereafter, as indicated by “printing result (saddle sheet discharge, after center-folding)”, when the center-folding process is carried out, the printed surface is arranged on the inner side of the printed matter, and is not arranged on a front cover.
[0012] In the case in which the printed surface is arranged on the inner side of the printed matter in this way, an image forming apparatus can invert a direction of the printed surface generally by making it pass through a double-side path, and arrange the printed surface on the outer side of the printed matter after the center-folding process.

SUMMARY OF THE INVENTION

[0013] However, there has been a problem that the direction of the printed surface cannot be inverted in the case in which a paper type of a recording medium of a front cover cannot pass through the double-side path.
[0014] The present invention provides a printing apparatus capable of inverting many types of recording media, a control method thereof, and a storage medium.
[0015] Accordingly, a first aspect of the present invention provides a printing apparatus capable of conveying a sheet to a bookbinding device that binds sheets of which front side and back side are inverted, comprising a printing unit configured to print an image on a sheet, and a control unit configured to perform control, in a case where the sheet is capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using the double-side conveying path, and perform control, in a case where the sheet is not capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using a one-side conveying path.
[0016] Accordingly, a second aspect of the present invention provides a method for controlling a printing apparatus that is capable of conveying a sheet to a bookbinding device that binds sheets of which front side and back side are inverted, the method comprising a printing step of printing an image on a sheet, and a control step of, in a case where the sheet is capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using the double-side conveying path, and, in a case where the sheet is not capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using a one-side conveying path.
[0017] Accordingly, a third aspect of the present invention provides a computer-readable non-transitory storage medium storing a program for making a computer execute a method for controlling a printing apparatus that is capable of conveying a sheet to a bookbinding device that binds sheets of which front side and back side are inverted, the method comprising a printing step of printing an image on a sheet, and a control step of, in a case where the sheet is capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using the double-side conveying path, and, in a case where the sheet is not capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using a one-side conveying path.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] FIG. 1 is a diagram showing an external appearance of an image forming apparatus as a printing apparatus according to an embodiment of the present invention.
[0020] FIG. 2 is a diagram schematically showing an electrical configuration of an MFP in FIG. 1.
[0021] FIG. 3 is a diagram showing a schematic configuration of a finisher in FIG. 1.
[0022] FIG. 4 is a diagram for describing a situation that a sheet is moved during printing in the MFP.
DESCRIPTION OF THE EMBODIMENTS

[0025] FIG. 7A is a diagram for describing center-folding printing using a saddle finisher without a switchback in prior art, and FIG. 7B is a diagram for describing center-folding printing using a saddle finisher with a switchback in prior art.

[0026] Hereinafter, an embodiment of the present invention will be described in detail with reference to the drawings.

[0027] FIG. 1 is a diagram showing an external appearance of an image forming apparatus (called an “MFP,” hereinafter) 300 as a printing apparatus according to the embodiment of the present invention.

[0028] In FIG. 1, an MFP 300 includes an ADF (automatic document feeder) 301, an operation panel 302, a manual paper feeder 303, a side paper deck 304, a cassette paper feeder 305, and a finisher 306 (bookbinding device).

[0029] The ADF 301 is a device for automatically and successively scanning a document bundle. The operation panel 302 receives operation input from a user, and displays various kinds of information to the user. The user can perform various kinds of setting, adjustments, confirmation of device conditions, or the like through the operation panel 302.

[0030] The manual paper feeder 303 is a paper feeder for setting a recording medium (called a “sheet”), hereinafter such as paper having a special use. The side paper deck 304 is a paper feeder for holding a large amount of sheets. The cassette paper feeder 305 is a paper feeder for holding sheets in various sizes separately in individual stages.

[0031] The finisher 306 can perform various finishing processes such as a stapling process, a punching process, and a binding process to sheets.

[0032] FIG. 2 is a diagram schematically showing an electrical configuration of the MFP 300 in FIG. 1.

[0033] In FIG. 2, the MFP 300 includes a scanner unit 501, a FAX unit 502, an NIC unit 503, an exclusive interface unit 504, a USB interface unit 505, an operation unit 506, a RIP unit 507, and an output image processing unit 508. Also, the MFP 300 includes an MFP control unit 509, a printer unit 510, a post-processing unit 511 as a finisher, a compression/expansion unit 512, a nonvolatile storage 513, a resource management unit 514, a CPU 515, a ROM 516, and a RAM 517.

[0034] The scanner unit 501 reads a paper document or the like, and image-processes image data of the read paper document. The FAX unit 502 transmits and receives the image data using a telephone line by a facsimile. The NIC (Network Interface Card) unit 503 transmits and receives the image data, device information or the like to/from an external device utilizing a network.

[0035] The exclusive interface unit 504 transmits and receives various kinds of data such as the image data to/from the exclusive interface unit 504. The USB interface unit 505 transmits and receives various kinds of data such as the image data to/from a USB device like a USB memory. The operation unit 506 receives an operation of a user. Also, the operation unit 506 is also a display unit, and displays various screens to the user. The RIP (Raster Image Processor) unit 507 executes a RIP process to PDL data.

[0036] The output image processing unit 508 performs an image process as needed to an image outputted by the printer unit 510 or the like. Further, the output image processing unit 508 stores intermediate data of the image data formed in the image process, bitmap data for printing and print ready data for which the bitmap data is compressed in the nonvolatile storage 513 as needed.

[0037] The MFP control unit 509 temporarily stores the image data according to a use of the MFP 300, and determines a sheet conveyance route. Also, the MFP control unit 509 appropriately reads the image data stored in the nonvolatile storage 513, transfers it to the printer unit 510, and executes an output process such as a printing process by the printer unit 510. Also, the MFP control unit 509 transfers the image data read from the nonvolatile storage 513 to the external device such as a computer or another MFP in response to a user’s indication.

[0038] The printer unit 510 performs the printing process, and an already printed sheet that is outputted is discharged to the post-processing unit 511 as the finisher 306.

[0039] The compression/expansion unit 512 performs a process of compressing and expanding the image data or the like. For example, when there are JPEG, JBIG, ZIP or the like as forms of compressed data transmitted and received through a network by the MFP 300, they are compressed and expanded in the compression/expansion unit 512.

[0040] The nonvolatile storage 513 is configured by a hard disk or the like capable of storing two or more pieces of image data. For example, the nonvolatile storage 513 can store various kinds of data such as the image data read in the scanner unit 501 and the image data received from the external device such as a computer through the NIC unit 503.

[0041] In the resource management unit 514, various kinds of parameter tables or the like handled in common such as fonts, a color profile, and a gamma table are stored. Also, the resource management unit 514 adds, reads, updates, and deletes the parameter tables.

[0042] The CPU 515 successively reads programs stored in the ROM 516 and the nonvolatile storage 513 to the RAM 517, and executes various processes including a process shown in a flowchart described later.

[0043] In the ROM 516 and the RAM 517, data for executing a job, various kinds of programs, and various kinds of setting data or the like are stored.

[0044] FIG. 3 is a diagram showing a schematic configuration of the finisher 306 in FIG. 1.

[0045] In FIG. 3, the finisher 306 includes conveyance rollers 431-439, a conveyance path 441, a stapler 442, a pushing plate 443, a stopper 444, folding rollers 445 and 446, a bundle conveyance roller pair 447, a rear end detection sensor 448, tip detection sensors 450 and 453, and a skew correction roller 451. The finisher 306 may be operated by a command from the MFP control unit 509, or may be operated by an original controller.

[0046] A sheet outputted to the finisher 306 is discharged to one of stacking trays 401 and 402 and a saddle stitching process tray 403 according to a type of a finishing process set by a user. For example, in the case of not executing the finishing process, the sheet is discharged to the stacking 401. In the case of executing a normal stapling process, the sheet is discharged to the stacking 402. Also, in the case of executing a saddle stitching process, the sheet is discharged to the saddle stitching process tray 403.
[0047] Also, the sheet outputted to the finisher 306 is conveyed until a rear end of the sheet reaches a position of the rear end detection sensor 448 by the conveyance rollers 431, 437 and 438. When the rear end of the sheet is detected by the rear end detection sensor 448, the conveyance rollers 437 and 438 holding the sheet are stopped. [0048] Next, the sheet is switched back by reverse rotations of the conveyance rollers 437 and 438, and is then conveyed until a tip of the sheet reaches a position of the tip detection sensor 450 by the conveyance roller 436. When the tip of the sheet is detected by the tip detection sensor 450, the conveyance roller 436 holding the sheet is decelerated, and the tip of the sheet is brought to a nip part of the skew correction roller 451. [0049] The conveyance roller 436 is continuously rotated for some time even after the tip of the sheet is brought to the nip part of the skew correction roller 451, and is stopped after the sheet forms a loop in a loop space. [0050] Next, the skew correction roller 451 starts to rotate. In the case in which the sheet is skewed, the skew is corrected by the skew correction roller 451. Then, the sheet whose skew is corrected is conveyed in a direction of the conveyance roller 439. When the tip of the sheet is detected by the tip detection sensor 453, the sheet is conveyed for a predetermined amount from the point of time, and the tip of the sheet is brought to the stopper 444. [0051] At the time, the sheet is positioned by the stopper 444 so that a binding position by the stapler 442 comes to the center of the sheet. The operation is repeated, and the plurality of sheets is successively conveyed to the conveyance path 441. In the present embodiment, a route is expressed as a path. [0052] When all the sheets configuring a printed matter are conveyed into the conveyance path 441, the sheets are aligned in a width direction by a width direction aligning plate not shown in the figure, and a sheet bundle is formed inside the conveyance path 441. At the time, the sheets conveyed into the conveyance path 441 are successively conveyed from the sheet corresponding to the innermost side of the printed matter, and are conveyed such that the sheet corresponding to a front cover of the printed matter is the last. [0053] In the case in which setting is configured to perform the saddle stitching process, the stapler 442 performs a stitching process to the sheet bundle. When the sheet bundle is stitched by the stapler 442, the stopper 444 supporting the sheet bundle is moved to a downstream side in a conveyance direction. Accompanying that, the sheet bundle is moved downstream in the conveyance direction. [0054] The stopper 444 positions the sheet bundle so that the center of the sheet bundle comes to a position of the pushing plate 443. A tip of the pushing plate 443 is brought into contact with a part to form a fold of the sheet bundle positioned by the stopper 444, and the fold is formed on the sheet bundle by pushing the sheet bundle into the nip part of the folding rollers 445 and 446. [0055] The sheet bundle on which the fold is formed by the folding rollers 445 and 446 is discharged to the saddle stitching process tray 440 by the bundle conveyance roller pair 447. [0056] FIG. 4 is a diagram for describing a situation that the sheet is moved during printing in the MFP 300. [0057] Arrows shown in FIG. 4 indicate a moving direction of the printed matter in the case of not passing through an inversion path 605 or a double-side path 606. First, the sheet is fed from the cassette paper feeder 305. Next, after toner is transferred to the sheet in a transfer unit 602, the transferred toner is fixed in a fixing unit 603. The sheet to which the toner is fixed is discharged to the finisher 306 through the inversion path 605 or the double-side path 606 as needed. [0058] In a configuration like FIG. 4, the sheet is discharged in a face-up manner that a printed surface is made to face up during single-side printing. [0059] FIG. 5A is a diagram for describing a situation that a sheet 702 is moved through the inversion path 605, and FIG. 5B is a diagram for describing a situation that a sheet 802 is moved through the double-side path 606. Triangles shown on the sheets 702 and 802 in FIG. 5A and FIG. 5B indicate a direction of the printed surface of the front cover. [0060] The inversion path 605 will be described first. In FIG. 5A, the sheet 702 to which an image is fixed by the fixing unit 603 advances to an approach path 803 to the inversion path 605. The sheet 702 is moved through the inversion path 605 to advance to a position X, and then advances to a position Y through the inversion path 605 from an exit path 705 of the inversion path 605. The sheet 702 exits from the inversion path 605 from a side-opposite to the side of an approach to the inversion path 605. Thus, the sheet 702 is discharged in the state that the printed surface is inverted upside down (face down). [0061] Next, the double-side path 606 will be described. In FIG. 5B, the sheet 802 to which the image is fixed by the fixing unit 603 advances to an approach path 803 to the double-side path 606. The sheet 802 is moved through the double-side path 606, passes through a position X, and advances to a position Y of an inversion unit 804 in the double-side path 606. [0062] Then, the sheet 802 advances to a position Z through the inversion unit 804 from an exit path 806 of the inversion unit 804, and advances to a position W further. Here, the sheet 802 exits the inversion unit 804 from a side-opposite to the side of an approach to the double-side path 606. Thus, the printed surface of the sheet 802 is inverted upside down. Thereafter, the sheet 802 advances to a position U through a position V, and is discharged in the state that the printed surface faces down. [0063] In this way, in the present embodiment, two inversion routes that are the inversion path 605 and the double-side path 606 are provided as the inversion routes for inverting the sheet. When the sheet is in the saddle stitching process, there are sheets of types that can pass through the inversion path 605 but cannot pass through the double-side path 606. For example, coated paper can pass through the inversion path 605 but cannot pass through the double-side path 606. On the other hand, plain paper and recycled paper can pass through both of the inversion path 605 and the double-side path 606. Also, cardboard cannot pass through either of the inversion path 605 and the double-side path 606. [0066] It should be noted that whether or not the sheets of the individual types can pass through the inversion path 605 and whether or not they can pass through the double-side path 606 are not limited to these examples. Also, even for the same cardboard, the cardboard of a first type that is weak in stiff-
ness may be classified into the type that can pass through the inversion path 605, and the cardboard of a second type that is strong in stiffness may be classified into the type that cannot pass through the inversion path 605.

[0067] FIG. 6 is a flowchart showing a procedure of a sheet discharge control process executed by the CPU S15 in FIG. 2.

[0068] In FIG. 6, the CPU S15 executes the printing process to one side of a sheet (step S101), and then discriminates whether or not inversion of the sheet is needed (step S102). A standard for discriminating whether or not the inversion is needed will be described later.

[0069] In the case of discriminating that the inversion of the sheet is not needed as a result of discrimination in step S102 (NO in step S102), the CPU S15 discharges the sheet to the finisher 306 (step S108), and ends the process.

[0070] On the other hand, in the case of discriminating that the inversion of the sheet is needed as a result of the discrimination in step S102 (YES in step S102), the CPU S15 discriminates whether or not the sheet can pass through the double-side path 606 (step S103).

[0071] In the case in which the sheet can pass through the double-side path 606 as a result of discrimination in step S103 (YES in step S103), the CPU S15 inverts the sheet in the double-side path 606 (step S107), then discharges the sheet to the finisher 306 (step S108), and ends the process.

[0072] On the other hand, in the case in which the sheet cannot pass through the double-side path 606 as a result of discrimination in step S103 (NO in step S103), the CPU S15 discriminates whether or not the sheet can pass through the inversion path 605 (step S104).

[0073] In the case in which the sheet can pass through the inversion path 605 as a result of discrimination in step S104 (YES in step S104), the CPU S15 inverts the sheet in the inversion path 605 (step S106), then discharges the sheet to the finisher 306 (step S108), and ends the process.

[0074] On the other hand, in the case in which the sheet cannot pass through the inversion path 605 as a result of the discrimination in step S104 (NO in step S104), the CPU S15 displays an error screen indicating that the sheet cannot be inverted at the operation unit 506 (step S105). Then, the CPU S15 discharges the sheet to the finisher 306 (step S108), and ends the process.

[0075] Here, a standard for the discrimination in step S102 will be described. In the MFP 300, in the case in which the sheet is discharged to the finisher 306 in a face-up manner and the finisher 306 is a saddle finisher with a switchback, it is discriminated that the inversion of the sheet is needed. Also, in the MFP 300, in the case in which the sheet is discharged to the finisher 306 in a face-down manner and the finisher 306 is a saddle finisher without a switchback, it is also discriminated that the inversion of the sheet is needed.

[0076] On the contrary, in the MFP 300, in the case in which the sheet is discharged to the finisher 306 in a face-up manner and the finisher 306 is a saddle finisher without a switchback, it is discriminated that the inversion of the sheet is not needed. Also, in the MFP 300, in the case in which the sheet is discharged to the finisher 306 in a face-down manner and the finisher 306 is a saddle finisher with a switchback, it is also discriminated that the inversion of the sheet is not needed.

[0077] As described above, according to the present embodiment, in the case of discriminating that the sheet cannot pass through the double-side path 606, whether or not the sheet can pass through the inversion path 605 is provided separately from the double-side path 606 is discriminated further, and in the case of discriminating that the sheet can pass through the inversion path 605, control is performed so that the sheet passes through the inversion path 605.

[0078] On the other hand, in prior art, in the case of using the sheet that cannot pass through the double-side path 606, it is immediately discriminated that the sheet cannot be inverted, so that, compared to the prior art, more types of the sheets can be inverted in the present embodiment.

[0079] Also, according to the present embodiment, as long as it is the sheet that can pass through the inversion path 605 even if it cannot pass through the double-side path 606, the sheet can be discharged in a printing direction desired by a user and a center-folding process can be executed.

**OTHER EMBODIMENTS**

[0080] Embodiment(s) of the present invention can also be realized by a computer of a system or apparatus that reads out and executes computer executable instructions (e.g., one or more programs) recorded on a storage medium (which may also be referred to more fully as a 'non-transitory computer-readable storage medium') to perform the functions of one or more of the above-described embodiment(s) and/or that includes one or more circuits (e.g., application specific integrated circuit (ASIC)) for performing the functions of one or more of the above-described embodiment(s), and by a method performed by the computer of the system or apparatus by, for example, reading out and executing the computer executable instructions from the storage medium to perform the functions of one or more of the above-described embodiment(s) and/or controlling the one or more circuits to perform the functions of one or more of the above-described embodiment(s). The computer may comprise one or more processors (e.g., central processing unit (CPU), micro processing unit (MPU)) and may include a network of separate computers or separate processors to read out and execute the computer executable instructions. The computer executable instructions may be provided to the computer, for example, from a network or the storage medium. The storage medium may include, for example, one or more of a hard disk, a random-access memory (RAM), a read only memory (ROM), a storage of distributed computing systems, an optical disk (such as a compact disc (CD), digital versatile disc (DVD), or Blu-ray Disc (BD)™), a flash memory device, a memory card, and the like.

[0081] While the present invention has been described with reference to exemplary embodiments, it is to be understood that the invention is not limited to the disclosed exemplary embodiments. The scope of the following claims is to be accorded the broadest interpretation so as to encompass all such modifications and equivalent structures and functions.


What is claimed is:

1. A printing apparatus capable of conveying a sheet to a bookbinding device that binds sheets of which front side and back side are inverted, comprising:
   a printing unit configured to print an image on a sheet; and
   a control unit configured to perform control, in a case where the sheet is capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using the double-side conveying path, and perform control, in a case where the sheet is not
capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using a one-side conveying path.

2. The printing apparatus according to claim 1, further comprising a determining unit configured to determine whether a sheet is capable of passing through a double-side conveying path,

wherein said control unit performs control, in a case where said determining unit determines that the sheet is capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using the double-side conveying path, and performs control, in a case where said determining unit determines that the sheet is not capable of passing through the double-side conveying path, so that the sheet is inverted and discharged using the one-side conveying path.

3. The printing apparatus according to claim 2, further comprising a judgment unit configured to judge whether the sheet is capable of passing through the one-side conveying path,

wherein said control unit performs control, when said determining unit determines that the sheet is not capable of passing through the double-side conveying path and said judgment unit judges that the sheet is capable of passing through the one-side conveying path, so that the sheet is inverted and discharged using the one-side conveying path.

4. The printing apparatus according to claim 3,

wherein, in a case where the sheet is a coated paper, said determining unit determines that the sheet is not capable of passing through the double-side conveying path and said judgment unit judges that the sheet is capable of passing through the one-side conveying path.

5. The printing apparatus according to claim 3,

wherein in a case where the sheet is a cardboard of a first type, said judgment unit judges that the sheet is capable of passing through the one-side conveying path, and

wherein in a case where the sheet is a cardboard of a second type, said judgment unit judges that the sheet is not capable of passing through the one-side conveying path.

6. The printing apparatus according to claim 3,

wherein said control unit performs control to notify an error when said determining unit determines that the sheet is not capable of passing through the double-side conveying path and said judgment unit judges that the sheet is not capable of passing through the one-side conveying path.

7. The printing apparatus according to claim 2, further comprising a discriminating unit configured to discriminate whether the sheet is needed to be inverted,

wherein said determining unit determines whether the sheet is capable of passing through the double-side conveying path in a case where said discriminating unit discriminates that the sheet is needed to be inverted.

8. A method for controlling a printing apparatus that is capable of conveying a sheet to a bookbinding device that binds sheets of which front side and back side are inverted, the method comprising:

a printing step of printing an image on a sheet; and

a control step of, in a case where the sheet is capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using the double-side conveying path, and, in a case where the sheet is not capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using a one-side conveying path.

9. A computer-readable non-transitory storage medium storing a program for making a computer execute a method for controlling a printing apparatus that is capable of conveying a sheet to a bookbinding device that binds sheets of which front side and back side are inverted, the method comprising:

a printing step of printing an image on a sheet; and

a control step of, in a case where the sheet is capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using the double-side conveying path, and, in a case where the sheet is not capable of passing through the double-side conveying path, performing control so that the sheet is inverted and discharged using a one-side conveying path.

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