





## Reference Material

## DP-DS820/DP-DS820 (A) Print System Flow

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-  You cannot resale/use the DP-DS820 without destination number (A) in the U.S.

## 1. Configuration

## (1) Single Printer System

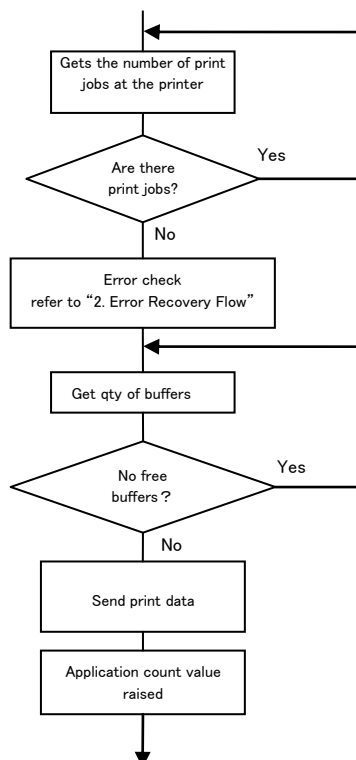
Printers : One unit  
Buffering : Double Buffer  
Spooling : Spool ON



## [Sample Flow]

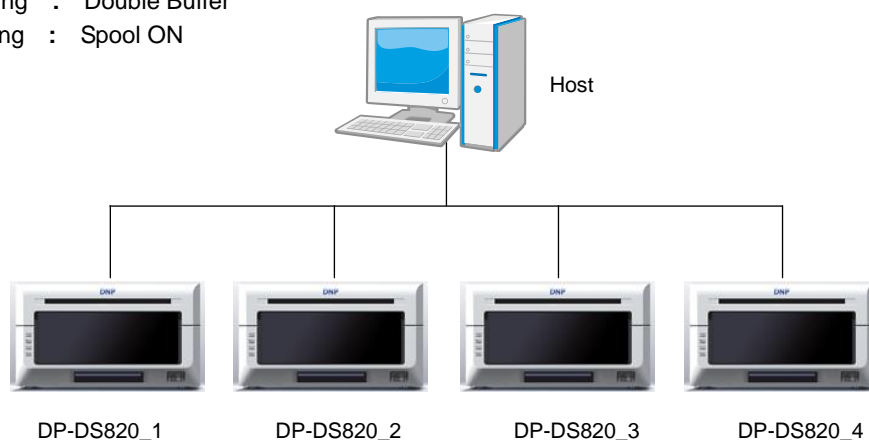
In the overall process, when a print request is received, it checks the printer to see if data can be sent, and then it sends the data. Details of the process are listed below.

- ① When a print request is received, it checks to see if there is a print job at the printer (WindowsAPI EnumJobs). If there is a job, it repeats the check process.
- ② It performs an error check. If there is an error, it performs the error recovery process. (for details, refer to "2. Error Recovery Flow")
- ③ If there is no error, it gets the number of free buffers at the printer (status API GetFreeBuffer).
- ④ If there are no free buffers, it repeats the check for free buffers.
- ⑤ If there are 1 or more free buffers, it sends the print data to the printer.
- ⑥ After the print data is sent, the application's print count value is raised.



## (2) 4 Printer System

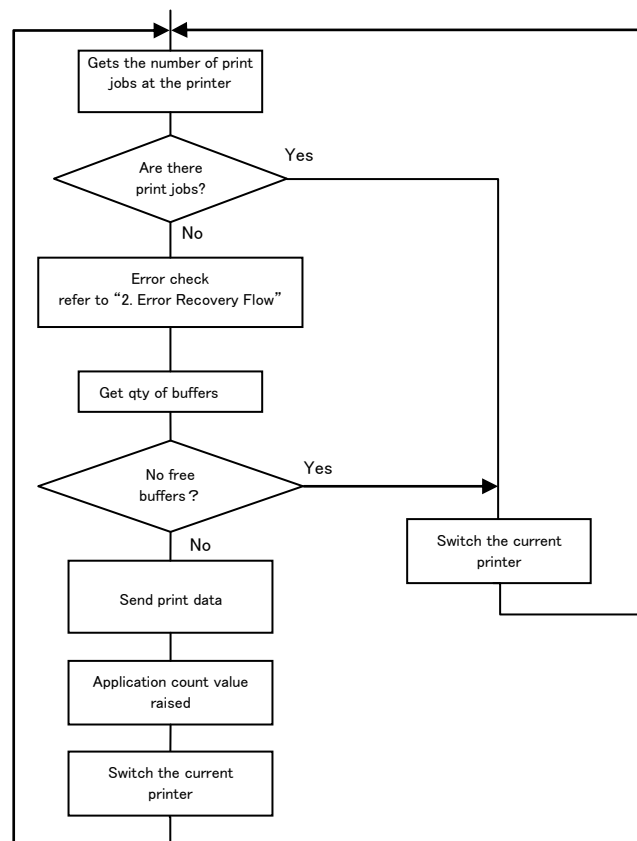
Printers : Four units  
 Buffering : Double Buffer  
 Spooling : Spool ON



### [Sample Flow]

In the overall process, when a print request is received, it looks for a printer that can receive data, and then it sends the data. Details of the process are listed below.

- ① When a print request is received, it checks to see if there is a print job at the current printer (WindowsAPI EnumJobs). If there is a job, it switches the current printer to a different printer.
- ② It performs an error check. If there is an error, it performs the error recovery process. (for details, refer to “2. Error Recovery Flow”)
- ③ If there is print job and no error, it gets the number of free buffers at the printer (status API GetFreeBuffer).
- ④ If there are no free buffers, it switches from the current printer and looks for a printer it can send to.
- ⑤ If there are 1 or more free buffers, it sends the print data to the printer.
- ⑥ After the print data is sent, the application's print count value is raised and the current printer is changed.



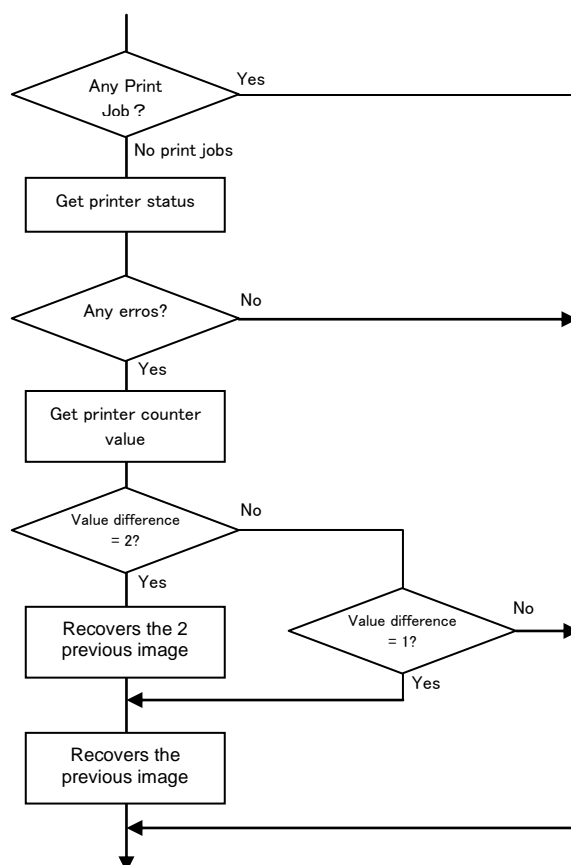
## 2. Error Recovery Flow

When an error occurs, it's necessary to find the image that was being printed at that time to find out the right image(s) to be recovered, based on the printer's counter ( GetCounterL in the Status API).

- (1) Checks for print jobs.
- (2) If there are no print jobs, gets the status of the printer and checks for any errors.
- (3) If there is any error found, gets counter value of the printer.
- (4) Compares the value of the printer's counter and the counter of the application side.
- (5) If the difference of the two counter values is 2, recovers the two previous images. (In a multi-printer system, sends the image to be reprinted to another printer that is ready. If it is a single printer, sends the image to be reprinted after the printer error is solved.) In the case when the difference is 1, recovers the previous image.

[Note]

- In the case where a print job is stacked or is not released for a long time, it's possible there is a communication error, and it may be necessary to go into the error recovery process.
- If there is no print job and communication is suspended for some reason, a failure code will be returned approx. 1 minute after sending the DP-DS820 printer status API to get the printer status. (During this time, the application is idling, waiting for the status to be returned) So, when confirming the status, it's recommended to check the time from the start of the status check to the end. If the time in between is too long, it's necessary to go into the error recovery process.



### 3. Concerning Error Onset and Life-counter Count Up Timing

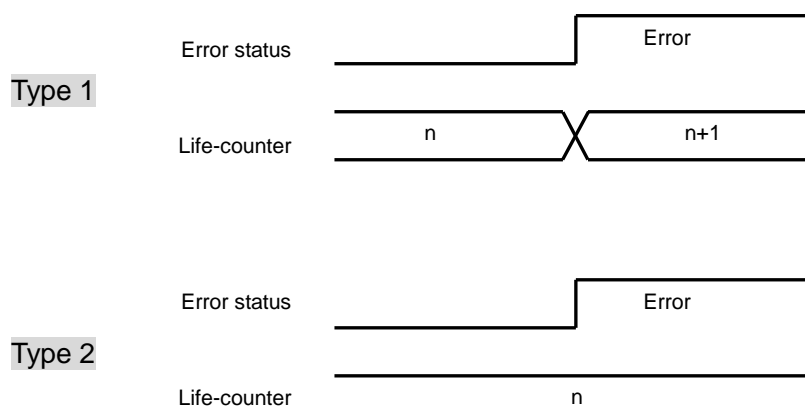
When an error occurs, the timing of the count up for the life-counter is as shown here. There are two kinds of timing, as shown in [Type 1] and [Type 2] below.

#### ■ Type 1

Ribbon end and paper end, and the error status is set after completion of printing. Because the printing has been completed normally, the life-counter value is counted up at the same time that the error status is set.

#### ■ Type 2

Any error other than ribbon end and paper end. Because printing is not complete at the time that the error status is set, the life-counter value is not counted up. (This is errors like ribbon cut and cutter error.)



### 4. Error Recovery

There are two kinds of errors: errors detected when a printer error status is obtained, and errors where a print job is kept waiting in the queue.

Normally, most errors are detected when a printer error status is obtained. Errors where a print job is kept waiting in the queue occur when there is a communication problem, as when the USB cable is disconnected or the printer power turned OFF during transmission.

#### [Error Status errors]

- When an error is detected, the printer's life-counter value is obtained.
- The count value from the application and the printer's life-counter value are compared.
- Using the difference in count values, the data that needs to be reprocessed is determined.
  - [difference is 0] : Printing of all transmitted data was completed, so data doesn't need to be sent again.
  - [difference is 1] : Printing of the previous 1 data was not completed, so that data needs to be reprocessed.
  - [difference is 2] : Printing of the previous 2 data was not completed, so both those data need to be reprocessed.

#### [Print Job errors]

- For errors where a print job is kept waiting in the queue, the error type and the life-counter value cannot be obtained through transmission. Therefore, when an error occurs, a message will appear indicating a problem with the printer. The reason for the error must be checked manually, and resolution of the problem must also be performed manually.
- When the error has been solved, the printer's life-counter will be obtained and compared to the count value from the application.
- Using the difference in count values, the data that needs to be reprocessed is determined. (See above)