



Document Messaging Technologies

OMR SPECS/Guidelines

8 Series Console Inserting System

State of RI

Johnston, RI



OMR Printing Guidelines for State of RI

Overview

The purpose of this section is to provide the necessary background for use in planning coding solutions for State of RI, to allow you to take full advantage of our software product offerings.

A second purpose is to provide information about coding in a format that can easily be used to communicate to State of RI what they need to know to work with us in design of their system, e.g. code design, code location, and code print quality.

The OMR codes may be located anywhere on the document **except:**

- Within the first 3/4" of the lead edge.
- Within the last 2" of the trail edge.
- Within 1/10" of the left edge
- Within the enter 1" of the document

You should be scanning a top scan, which will never be more than the top 2/3 of the page from the middle to the left. There is good clearance on the left edge of the statements. We will need to determine the exact coding scheme needed before manufacture. We will also work with you to assist your customers in placing OMR code on their documents

Inserter Control Code Scanning

The system will be capable of reading one OMR channel on the control document to control finishing of each mailpiece. (Suggested)

A sample format of an OMR code follows:

Mark	Code	Function
1	B/M	Benchmark *
2	EOC	End of collation *
3		
4	SEQ	- Sequence Check 0 *
5	SEQ	- Sequence Check 1 *
6	SEQ	- Sequence Check 2 *
7	SEQ	- Sequence Check 4 *

* printed on First page only

- Positioned on upper left corner of the page—Mark 1 at the bottom edge, followed by 2-7 – printed on first page of set (only), last page fed.
- Feeding mode – Face UP; Bottom edge leading

Barcode Location

To be determined by the application requirements of State of RI. And the final layout will be mutually agreed upon. Pitney Bowes will work with State of RI's technical staff to ensure all OMR definition and placements are to spec. Actual location on the page for OMR position must be determined..

Description

An **OMR code** is a series of 3 to 4 horizontal lines (if printed by an impact printer), or a solid horizontal line (if printed by a non-impact printer. One or more of these codes, printed in a column (known as a zone), when read by a scanner provide the information needed by the inserter to know what forms go together and in general how to process the mailpiece.

2. Definitions

Some of the more important terms used on OMR coding discussions appear below. The reader should also carefully read the Software Products section for others.

Bench Mark. Always the first mark read. This code instructs the system to start scanning and to look for more codes for more information.

Bench Mark is the only often-used mark that has a required position. All others can be placed anywhere within the scanning window. BM will be the mark closest to the bottom of the page, as we will be feeding Bottom edge leading in a face up mode

End-of-Collation (EOC). This tells the system that all of the documents for one collation have been fed and that the group can now be processed. This mark will only appear on the first page of the set. As it will be the last page fed, it will instruct the feeder to stop feeding.

Sequence Matching Verification, a software feature that verifies that each set is printed and mailed in sequence. Sequence matching matches the coded OMR data with every set ensuring that a rolling count of 7. As such, it detects any deviation of missing or doubles within the set of control documents and alerts the operator to take corrective action.. This feature is very useful in any control document sheet feeding application where the stack(s) of sheets can get "out of order" prior to reaching the inserter. Strongly recommended for document integrity.

Standard Features

√ Using 4 OMR lines can be used for coding the quantity of control document pages in a set. OMR lines are coded and scanned as a binary value. The quantity of OMR lines required will be randomly assigned and the binary count should never duplicate for sequential sets. Use of all 3 binary OMR lines allows for a match count of up to 7 in a set as follows:

Binary Value	OMR Line
4	_____
2	_____
1	_____
0	_____

OMR lines can be printed on every page fed of a set of control documents (See attached diagram).

- √ Verifies sets contained in the run
- √ Detects duplicate sets.
- √ Detects missing sets.
- √ Detects additional pages from another set.
- √ When a count error is detected, an error message is displayed on the screen and the system stops for operator removal of the documents on the inserter deck in front of the input device.

Definitions

Clear Zone. This is the space on the document from an edge to the first or last code line. A clear zone of 1/2" is required around the OMR scan code to any print.

Critical clear zones are the distances from:

- The leading edge to top of first dash
- The bottom of the last dash to the trailing edge of the document
- The side edge to the start of the first dash.
- Text to the start of end of dash.

Line Spacing (also known as Pitch): This is the vertical distance in the direction of paper travel between OMR code lines. The two standard distances are 1/6" (4.2mm) and 1/8" (3.2mm).

3. Print Quality

This is a critical subject, since scanning at the speeds typically found in the movement of paper in inserters requires good quality print. However, almost all non-impact printers that are maintained according to manufacturer's specifications provide acceptable print quality.

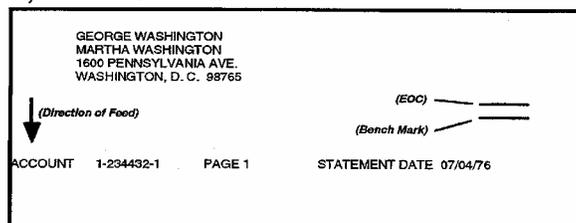
For forms produced by impact printers, printing should be done with black ink with carbon content.

4. OMR Coding Examples

The following illustrations of OMR coding solutions for some common customer requirements are meant to provide a better understanding of how OMR codes are applied.

Coding OMR Codes

Example 1 - Bench Mark, End of Collation



To achieve the desired results, only 2 marks are required. As shown above.

Example 2 - Bench Mark, End of Collation, Select Feeder 3, Zip Deflect.

OMR Requirements Package

The OMR Requirements package is designed to assist in the preparation and transmittal of the Forms Mock Up documentation. The receipt of the OMR scanning and placement information prior to live samples being available is important to the timely processing of system orders received in Danbury. This document must be used in conjunction with the PITNEY BOWES Production Mail Specification and is meant only as a guide for providing samples.

1. OMR Forms Mock Up Check List
2. OMR Scanner Placement and Channel Information
3. OMR Forms Mock Up Work Sheet
4. Sample Mock Up Sheet

The following is a clarification of the scan code location and the type of information that should be communicated to the Customer and Danbury. This format will also be used in defining the forms mockup where samples are not available. The outline must be used in conjunction with the Production Mail Specification and the OMR Scanner Placement and Channel Information document contained in this package because the requirements differ depending upon the type of input feeder used. Providing forms information in this format does not substitute for live customer SAMPLES in quantities stated previously.

OMR Forms Mockup Check List

A) For all applications where printed or blank forms and OMR placement does not exist please provide the following:

1. Paper size
2. OMR code location
3. OMR code dimensions
4. Indicate the number of zones and channels
5. Indicate the line spacing (6 or 8 Lines to the inch)
6. The clear area requirements per the OMR Scanner Placement document

OMR Code Placement

The following is a representation of the area on the page that the OMR channel-zones can reside. This is meant a starting point. Final placement of the string is approved by Danbury Test Engineering. The information needed is as follows:

1. OMR placement
 - from the side of the page
 - from the top page as it is fed
 - from the closest text
2. The type of background (blank form color or texture)
3. The direction of feed
4. The size of the page

