

MARC 21 Specifications for Record Structure, Character Sets, and Exchange Media

EXCHANGE MEDIA: Part 2

Diskette Transfer

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INTRODUCTION

The diskette formatting and labeling specifications used in the distribution of MARC 21 authority, bibliographic, classification, community information, and holdings records on diskette are described below. These diskette label specifications were provisionally approved by the Library of Congress, the MARC 21 Advisory Committee in November 1990 and by the Canadian Committee on MARC in June 1991. The specifications apply to internal diskette labels only.

Microcomputer diskette volume and file labels, like tape labels, communicate information from the originating system to the receiving system. The volume and file labels identify and characterize the diskette(s), the transaction, and the information contained on the microcomputer diskette(s). The volume and file labels provide an eye-readable display of identifying information and also enable machine processing of the information.

DISKETTE FORMAT

A MARC 21 microcomputer diskette for information interchange is a magnetic diskette (e.g., 3.5 inch microdisc) that contains label files and at least one file of MARC records.

DISKETTE FILE ORGANIZATION

Files may be organized for a transaction in one of three ways: 1) single volume, single file; 2) single volume, multiple files; and 3) multiple volumes, multiple files. Each single diskette constitutes one volume. Record blocking is not used and individual records do not span files or volumes. Files do not span volumes. Large logical files of records can be segmented into multiple physical files on separate volumes. The following configurations may be used. NOTE: The names in parentheses are required filenames. The notation nnn represents sequential numbers determined by the originator of the volume(s)/file(s).

Single volume, Single file Single volume, Multiple files

Volume Label File (VOL. nnn)	Volume Label File (VOL. nnn)
File Label File (FIL. nnn)	File Label File (FIL. nnn)
Bibliographic File	Bibliographic File
	File Label File (FIL. nnn)
	Bibliographic File

Multiple volumes, Multiple files

Volume A	Volume B
Volume Label File (VOL. nnn)	Volume Label File (VOL. nnn)
File Label File (FIL. nnn)	File Label File (FIL. nnn)
Bibliographic File	Bibliographic File
File Label File (FIL. nnn)	File Label File (FIL. nnn)
Bibliographic File	Bibliographic File

DISKETTE LABEL FILES

MARC 21 Microcomputer diskettes contain label files that identify and characterize the volume(s) and the file(s) of MARC 21 records. The label files are used to transfer non-MARC information between an originating system and a receiving system. The label files are written using only ASCII Latin characters. A *volume label* file is required for each new physical volume (i.e., each diskette). A *file label* file is required for each named file of MARC 21 records.

Diskettes should also bear an external eye-readable label which lists the Originating System ID (ORS), the Volume ID (VID), and the Date Volume(s) Compiled (DAT).

DISKETTE FILE NAMES

File names for label files must accommodate dissimilar operating systems, such as Windows, PC-DOS, MS-DOS, APPLE-DOS and Macintosh environments. While certain operating systems have more flexible naming conventions than others, label files are named according to DOS filename conventions that specify filenames of 1-to-8 characters and a 1-to-3 character extension. Alphabetic characters in filenames and extensions shall be in uppercase.

Volume label files are named "VOL.nnn" (nnn are numerics designating the volumes, e.g., VOL.001, VOL.002). The 3-digit numeric extensions in the filename are assigned in a sequential order, and the highest number in the extension will equal the total number of volumes in a transaction.

File label files are named "FIL.nnn" (nnn are numerics designating the files, e.g., FIL.001).

Record files are named according to DOS naming conventions that allow names of 1-8 characters in length, a 1-3 character extension, etc. (e.g., SERMARC.nnn). The 3-digit numeric filename extension of the bibliographic file will match the 3-digit numeric filename extension of the file label with which it is associated.

LABEL FILE STRUCTURE

A label file consists of a sequence of fields. Fields have a maximum length of 80 characters. Each field in a label file begins with a three-character tag identifying the field. The tag is followed by two blanks (ASCII character 20(hex)). The field's data content follows the two blanks. Each field ends with a number sign "#" (ASCII character 23(hex)) and a carriage return (ASCII character 0D(hex)) or carriage return/line feed (ASCII characters 0D(hex) 0A(hex)), dependent on operating systems and subject to the agreement between originating and receiving systems. The 80 character maximum length of the field includes the three character tag, the two blanks, the data content, the number sign, and the carriage return or carriage return/line feed. This results in a text string that is easily displayed on a monitor or printed out.

Certain fields in the label files are specified as mandatory and must be present in each label file. In these fields, data content or one fill character the vertical bar (| - ASCII character 7C(hex)), must be supplied. Mandatory or optional characteristics of the fields are noted below.

Several of the fields are repeatable when either of the following two conditions exist: 1) the data content exceeds the space available in the field (73 characters between the blank space and number sign); or, 2) for eye readability, the sections of the data are moved to a new line. In each case, the three-character tag and two blank spaces are repeated.

DISKETTE VOLUME LABELS -- Tags/Fields

The following order of the fields in the volume label is mandatory whether or not all fields are present.

<i>Tag</i>	<i>Element Name</i>	<i>Description</i>	<i>Mandatory /Optional</i>	<i>Repeatable</i>
ORS	Originating System ID	Alphanumeric	M	NR
RCS	Receiving System ID	Alphanumeric	O	R
DAT	Date Volume(s) Compiled	YYYYMMDD	M	NR
DES	Description of Records	Alphanumeric	O	R
TRN	Transaction ID	Alphanumeric	O	NR
VID	Volume ID	Numeric	M	NR
VTR	No. of Vols. in Transaction	Numeric	M*	NR
BFV	Bibl. Files in Volume	Numeric	M	NR
BFT	Bibl. Files in Transaction	Numeric	O	NR
PON	Purchase Order Number(s)	Alphanumeric	O	R
INV	Invoice No(s). in Transaction	Alphanumeric	O	R
CSN	Transaction Bill-To ID	Alphanumeric	O	NR
LOC	Location(s)	Alphanumeric	O	R
NOT	Note(s)	Alphanumeric	O	R

*Field VTR is only mandatory on the final volume of a transaction.

ORS (Originating System ID): Mandatory. Not Repeatable. The name of the system that compiled the files of records and produced the volume(s) in the transaction. Alphanumeric.

RCS (Receiving System ID): Optional. Repeatable. Number(s) and/or name(s) of the receiving system(s) (e.g., library, processing center, school, collection, agency, or office) of the records in this transaction. The number/name can be assigned by the system listed in the field ORS, chosen by the system listed in this field, or a designated standard number, i.e., SAN. Multiple names are separated by two blank spaces followed by a backslash (\ - ASCII character 5C(hex)). Alphanumeric.

DAT (Date Volume(s) Compiled): Mandatory. Not Repeatable. This is the date when the originating system completed the compilation of bibliographic records on the volume(s) in this transaction. This is not the date of the creation of the particular bibliographic records contained in the bibliographic files. This field is recorded according to *Representation of Dates and Times* (ISO 8601). The date requires 8 numeric characters in the pattern *yyyymmdd* (4 for the year, 2 for the

month, and 2 for the day; right justified and zero filled).

DES (Description of Records): Optional. Repeatable. A description of the records contained on the volume or the application(s) for which the records are intended to be used (e.g., test records, cataloging, union list, MARC 21 Holdings, etc.) Alphanumeric.

TRN (Transaction ID): Optional. Not Repeatable. Identifier that identifies a volume or set of volumes transferred in one operation. Alphanumeric.

VID (Volume ID): Mandatory. Not Repeatable. Numeric identifier of the volume. Three numeric characters, right justified and zero filled.

VTR (Number of Volumes in Transaction): Mandatory on final volume of transaction only; Optional on other volumes. Not Repeatable. The total number of volumes in this transaction. Three numeric characters, right justified and zero filled.

BFV (Bibliographic Files on Volume): Mandatory. Not Repeatable. The total number of bibliographic files in the volume. Three numeric characters, right justified and zero filled.

BFT (Bibliographic Files in Transaction): Optional. Not Repeatable. The total number of bibliographic files on all the diskettes in this transaction. Three numeric characters, right justified and zero filled.

PON (Purchase Order Number(s)): Optional. Repeatable. The purchase orders number(s) covered by the transaction. Alphanumeric.

INV (Invoice Number(s) in Transaction): Optional. Repeatable. This includes all invoice numbers for all files in this transaction. Alphanumeric.

CSN (Transaction Bill-To ID): Optional. Not Repeatable. Number and/or name of the agency/institution which is billed for the transaction. The number/name can be assigned by the system listed in the field ORS, chosen by the system listed in this field, or a designated standard number, i.e., SAN. Alphanumeric.

LOC (Location(s)): Optional. Repeatable. This field lists the locations related to the records in the bibliographic files of the transaction. Multiple locations are separated by two blank spaces followed by a backslash (\ - ASCII character 5C(hex)). MARC Organization or other codes can be used to designate locations. Alphanumeric.

NOT (Note(s)): Optional. Repeatable. This field is available for textual information, messages, etc. Alphanumeric.

Example of volume label: File name "VOL.001" (Filename extension corresponds to the VID)

```

ORS  Library X System Identification#
RCS  University of Michigan Library Processing Center#
DAT  19900322#
DES  Cataloging#
TRN  03201990NAR#
VID  001#
VTR  022#
BFV  002#
BFT  893#
PON  12311989UML#
INV  1211990CDS#
CSN  University of Michigan Financial Office#
LOC  Law Library \Medical Library \Engineering Library#
NOT  Contact B. Smith, (202) 707-1111, if you have questions.#

```

NOTE: In the above example # = number sign (ASCII graphic 23(hex).

DISKETTE FILE LABELS -- Tags/Fields

The following order of the fields in the file label is mandatory whether or not all fields are present.

<i>Tag</i>	<i>Element Name</i>	<i>Description</i>	<i>Mandatory</i> <i>/Optional</i>	<i>Repeatable</i>
VID	Volume Number ID	Numeric	O	NR
FID	File ID	Alphanumeric	M	NR
DES	Description of Records	Alphanumeric	O	R
RBF	Records in Bibl. File	Numeric	M	NR
INV	Invoice Number(s)Covering Records in File	Alphanumeric	O	R
LOC	Location(s)	Alphanumeric	O	R
NOT	Note(s)	Alphanumeric	O	R

VID (Volume ID): Optional. Not Repeatable. Numeric identifier of the volume. Three numeric characters, right justified and zero filled.

FID (File ID): Mandatory. Not Repeatable. Identifier that gives the name and/or number of the file containing the records. Alphanumeric.

DES (Description of Records): Optional. Repeatable. Indicates the application(s) for which the records are intended to be used (e.g., cataloging, union list, test records, MARC 21 Holdings, etc.) Alphanumeric.

RBF (Number of Records in Bibliographic File): Mandatory. Not Repeatable. The total number of records contained in the file. Seven numeric characters, right justified and zero filled.

INV (Invoice Number(s) Covering the Records in Bibliographic File): Optional. Repeatable. This includes all invoice numbers for all records in the bibliographic file. Alphanumeric.

LOC (Locations): Optional. Repeatable. This field lists the locations related to the records in the file. Multiple locations are separated by two blanks followed by a backslash (\ - ASCII character 5C(hex)). MARC 21 or other codes can be used to designate locations. Alphanumeric.

NOT (Note(s)): Optional. Repeatable. This field is available for textual information, messages, etc. Alphanumeric.

Example of file label: File name: "FIL.002" (Filename extension corresponds to the FID)

```
VID  001#  
FID  002#  
DES  Union Catalog Records#  
RBF  0000258#  
INV  1211990CDS#  
LOC  UMML#  
NOT  Records are in LCCN order per your request#
```

NOTE: In the above example # = number sign (ASCII graphic 23(hex)).

DISKETTE DIRECTORY DISPLAY

The MARC 21 diskette volume and file label files are designed to allow the determination of the content of a diskette by listing its directory using the DOS "dir" command (or similar command in other system environments). Below is an example of the directory listing for a typical diskette containing files of MARC 21 records. In this example, the diskette contains three files of bibliographic records.

Example:

```
A:> dir
```

```
Volume in drive A is 001
```

```
Directory of A:\
```

```
VOL.001
```

```
FIL.001
```

```
BOOKMARC.001
```

```
FIL.002
```

```
SERMARC.002
```

```
FIL.003
```

```
VMMARC.003
```

Since the data and files on microcomputer diskettes are usually accessed in random order, the sequence of the various files listed in the directory does not matter. The example above has ordered the files so as to show the correspondence between the file label files and the bibliographic files.

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