

Exchange Media

Chapter overview

Chapter 6 describes tape cartridge specifications and various transfer and conversion processes.

In this chapter

This chapter includes the following sections:

Section	Page
6.1 Introduction to Tape Cartridge Specifications	6:2
6.2 Magnetic Tape Cartridge Specifications for Bibliographic Records	6:4
6.3 Magnetic Tape Cartridge Specifications for Holdings Records	6:7
6.4 Export Specifications	6:12
6.5 Record Sequence	6:17

6.1 Introduction to Tape Cartridge Specifications

Introduction

This section presents an overview of OCLC-MARC tape cartridge specifications.

General specifications

Specification	Description
Track	18 track 3480 compatible cartridges
Character set	Extended ASCII
Internal labels	<ul style="list-style-type: none">• Conform to ANSI X3.27-1969• 80 character records identify the tape cartridge and its contents• Data Set Trailer Label 1 also shows the number of blocks on the tape cartridge
Block size and record length	<ul style="list-style-type: none">• Unblocked, variable-length records conform to ANSI X3.27-1969• Records are not blocked, but are segmented, if necessary, so that no physical record exceeds 2048 bytes• Segments contain no control information• If necessary, the last segment of a record is padded with spaces to a length of 18 bytes• These files are described in IBM operating systems terms as RECFM=U and BLKSIZE=2048• A logical record may extend to 1 or more physical records• Maximum size of a logical record = 6,144 characters

6.1 Introduction to Tape Cartridge Specifications (continued)

Fill character	<ul style="list-style-type: none">• OCLC uses the character X'7C' (hexadecimal 7C) as a fill character wherever a data element would otherwise contain an illegal value• In field 007, OCLC uses X'2D' as a placeholder• Using X'2D' as a placeholder is not part of MARC 21
Tape cartridge care	OCLC uses premium-grade magnetic tape cartridges. With proper handling, storage should have little effect on the readability of the information.
Handling and storage	<p>Handle and store magnetic tape cartridges in the following way to maintain their quality:</p> <ul style="list-style-type: none">• Use finger grips, if present, to lift a single cartridge• Never touch the tape surface. Residue from a fingerprint can create greater head-to-tape separation and result in a loss of signal (data)• Leader blocks should not be removed and doors should not be opened to prevent damage• Cartridges that are dirty or damaged should not be placed in a drive• No more than six cartridges should be carried or stacked at a time to minimize the risk of dropping the stack• Store cartridges in an appropriate rack or other storage container designed for magnetic tape cartridges
Warranty	To qualify for warranty, check each OCLC-MARC tape cartridge within 60 days of receipt. Ensure that the tape cartridge can be read, the format is correct, and the record count agrees with the Output Tape Cartridge Generation sheet accompanying the tape cartridge.
Product Warranty Limitation Statement	OCLC replaces inaccurate or otherwise defective offline products, including those damaged or lost in transit, when caused through the fault of OCLC or its agent. Replacement may be made by reproducing the product or by requiring online transaction by users with issuance of credit as OCLC deems appropriate for users who notify OCLC of any inaccurate, defective, damaged, or lost products within 60 days of receipt of such products, or within 75 days of shipment as evidenced by OCLC record of shipment. OCLC makes no other express or implied warranty, including the warranty of merchantability.

6.2 Magnetic Tape Cartridge Specifications for Bibliographic Records

Introduction

This section describes the contents of OCLC-MARC Subscription service tape cartridge labels for bibliographic records implemented by OCLC.

Volume header label

Byte	Definition
00–02	Label Identifier <ul style="list-style-type: none">Always = VOL for volume header label
03	Label Number <ul style="list-style-type: none">Always = 1
04–09	Volume Serial Number <ul style="list-style-type: none">AANNNN: AA = code for the service and NNNN = 4-digit number assigned by OCLC OperationsExamples include:<ul style="list-style-type: none">GVNNNN = GovDoc serviceMMNNNN = WorldCat Collection Sets (Major Microforms)OCNNNN = OCLC-MARC Subscription service
10	Accessibility <ul style="list-style-type: none">Always = blank
11–36	Not Used <ul style="list-style-type: none">Always = blanks
37–50	Owner Identification <ul style="list-style-type: none">CCCbbbbDDMMYY format<ul style="list-style-type: none">CCC = OCLC institution symbolbbbb = blanksDD = dayMM = monthYY = year
51–78	Not Used <ul style="list-style-type: none">Always = blank
79	Label Standard Level <ul style="list-style-type: none">Always = 1

6.2 Magnetic Tape Cartridge Specifications for Bibliographic Records (continued)

Data set header label 1

Byte	Definition
00-02	Label Identifier <ul style="list-style-type: none">Always = HDR for data set header label
03	Label Number <ul style="list-style-type: none">Always = 1
04-20	Data Set Identifier <ul style="list-style-type: none">Always = Z39.2-71MARC-OCLC
21-26	Data Set Serial Number <ul style="list-style-type: none">CCCNNN format<ul style="list-style-type: none">CCC = OCLC institution symbolNNN = 3-digit numberNNN increases by 1 for each data set OCLC creates for the institution
27-30	Volume Sequence Number <ul style="list-style-type: none">0001 for the first volume of the data set0001 increases by 1 for each successive volume in the data set
31-34	Data Set Sequence Number <ul style="list-style-type: none">Always = 0001
35-40	Not Used <ul style="list-style-type: none">Always = blanks
41-46	Creation Data <ul style="list-style-type: none">YYMMDD format<ul style="list-style-type: none">YY = yearMM = monthDD = day
47-52	Not Used <ul style="list-style-type: none">Always = blanks
53	Data Set Security <ul style="list-style-type: none">Always = blank
54-59	Block Count <ul style="list-style-type: none">Always = 000000The block count is recorded in the trailer label
60-66	System Code <ul style="list-style-type: none">Always = IBM/MVS
67-79	Not Used <ul style="list-style-type: none">Always = blanks

6.2 Magnetic Tape Cartridge Specifications for Bibliographic Records (continued)

Data set trailer label 1

Byte	Definition
00–02	Label Identifier <ul style="list-style-type: none">Always = EOF or EOV<ul style="list-style-type: none">EOF = trailer label for a one-volume data set or the last trailer label 1 in a multi-volume data setEOV = trailer label for a multi-volume data set which is not the last trailer label 1
03	Label Number <ul style="list-style-type: none">Always = 1
04–20	Data Set Identifier <ul style="list-style-type: none">Always = Z39.2-71MARC-OCLC
21–26	Data Set Serial Number <ul style="list-style-type: none">CCCN format<ul style="list-style-type: none">CCC = OCLC institution symbolNNN = 3-digit numberNNN increases by 1 for each data set OCLC creates for the institution
27–30	Volume Sequence Number <ul style="list-style-type: none">0001 for the first volume of the data set0001 increases by 1 for each successive volume in the data set
31–34	Data Set Sequence Number <ul style="list-style-type: none">Always = 0001
35–40	Not Used <ul style="list-style-type: none">Always = blanks
41–46	Creation Date <ul style="list-style-type: none">YYMMDD format<ul style="list-style-type: none">YY = yearMM = monthDD = day
47–52	Not Used <ul style="list-style-type: none">Always = blanks
53	Data Set Security <ul style="list-style-type: none">Always = blank
54–59	Block Count <ul style="list-style-type: none">Number of physical records on the volume of the data set
60–66	System Code <ul style="list-style-type: none">Always = IBM/MVS
67–79	Not Used <ul style="list-style-type: none">Always = blanks

6.3 Magnetic Tape Cartridge Specifications for Holdings Records

Introduction

This section describes the contents of Serial Union List tape cartridge labels implemented by OCLC.

Volume header label

Byte	Definition
00–02	Label Identifier <ul style="list-style-type: none">Always = VOL for volume header label
03	Label Number <ul style="list-style-type: none">Always = 1
04–09	Volume Serial Number <ul style="list-style-type: none">SUNNNN format<ul style="list-style-type: none">SU = volume serial numberNNNN = 4-digit number assigned by OCLC
10	Accessibility Always = blank
11–36	Not Used Always = blanks
37–50	Owner Identification <ul style="list-style-type: none">GGGGNNNNDDMMYY format<ul style="list-style-type: none">GGGG = 4-character Union List group symbolNNNN = 4-digit order numberDD = dayMM = monthYY = year
51–78	Not Used <ul style="list-style-type: none">Always = blanks
79	Label Standard Level <ul style="list-style-type: none">Always = 1

6.3 Magnetic Tape Cartridge Specifications for Holdings Records (continued)

Data set header label 1

Byte	Definition
00–02	Label Identifier <ul style="list-style-type: none">Always = HDR for data set header label
03	Label Number <ul style="list-style-type: none">Always = 1
04–20	Data Set Identifier <ul style="list-style-type: none">Always = Z39.44–MARC-OCLC
21–26	Data Set Serial Number <ul style="list-style-type: none">SUNNNN format<ul style="list-style-type: none">SU = volume serial numberNNNN = volume serial number of the first volume in the data set taken from the volume header labelThe data set serial number is the same for all volumes of a multi-volume data set
27–30	Volume Sequence Number <ul style="list-style-type: none">0001 for the first volume of the data set0001 increases by 1 for each successive volume in the data set
31–34	Data Set Sequence Number <ul style="list-style-type: none">Always = 0001
35–40	Not Used <ul style="list-style-type: none">Always = blanks
41–46	Creation Data <ul style="list-style-type: none">YYDDD format<ul style="list-style-type: none">YY = yearDDD = day of the yearFor example, March 14 is 072 in most years and 073 in leap years
47–52	Not Used <ul style="list-style-type: none">Always = blanks
53	Data Set Security <ul style="list-style-type: none">Always = blank
54–59	Block Count <ul style="list-style-type: none">Always = 000000The block count is recorded in the trailer label
60–66	System Code <ul style="list-style-type: none">Always = IBM/MVS
67–79	Not Used <ul style="list-style-type: none">Always = blanks

6.3 Magnetic Tape Cartridge Specifications for Holdings Records (continued)

Data set header label 2

Byte	Definition
00–02	Label Identifier <ul style="list-style-type: none">Always = HDR for data set header label
03	Label Number <ul style="list-style-type: none">Always = 2
04	Record Format <ul style="list-style-type: none">Always = U for undefined length
05–09	Block Length <ul style="list-style-type: none">Always = 02048
10–14	Record Length <ul style="list-style-type: none">Always = 00000 for the records varying in length
15–49	Not Used <ul style="list-style-type: none">Always = blanks
50–51	Buffer Offset <ul style="list-style-type: none">Always = 00
52–79	Not Used <ul style="list-style-type: none">Always = blanks

6.3 Magnetic Tape Cartridge Specifications for Holdings Records (continued)

Data set trailer label 1

Byte	Definition
00–02	Label Identifier <ul style="list-style-type: none">Always = EOF or EOV<ul style="list-style-type: none">EOF = trailer label for a one-volume data set or the last trailer label 1 in a multi-volume data setEOV = trailer label for a multi-volume data set which is not the last trailer label 1
03	Label Number <ul style="list-style-type: none">Always = 1
04–20	Data Set Identifier <ul style="list-style-type: none">Always = Z39.44–MARC-OCLC
21–26	Data Set Serial Number <ul style="list-style-type: none">SUNNNN format<ul style="list-style-type: none">SU = volume serial numberNNNN = volume serial number of the first volume in the data set taken from the volume header labelThe data set serial number is the same for all volumes of a multi-volume data set
27–30	Volume Sequence Number <ul style="list-style-type: none">0001 for the first volume of the data set0001 increases by 1 for each successive volume in the data set
31–34	Data Set Sequence Number <ul style="list-style-type: none">Always = 0001
35–40	Not Used <ul style="list-style-type: none">Always = blanks
41–46	Creation Date <ul style="list-style-type: none">YYDDD format<ul style="list-style-type: none">YY = yearDDD = day of the yearFor example, March 14 is 072 in most years and 073 in leap years
47–52	Not Used <ul style="list-style-type: none">Always = blanks
53	Data Set Security <ul style="list-style-type: none">Always = blank
54–59	Block Count <ul style="list-style-type: none">Number of physical records on this volume of the data set
60–66	System Code <ul style="list-style-type: none">Always = IBM/MVS
67–79	Not Used <ul style="list-style-type: none">Always = blanks

6.3 Magnetic Tape Cartridge Specifications for Holdings Records (continued)

Data set trailer label 2

Byte	Definition
00-02	Label Identifier <ul style="list-style-type: none">Always = EOF or EOV<ul style="list-style-type: none">EOF = trailer label for a one-volume data set or the last trailer label 1 in a multi-volume data setEOV = trailer label for a multi-volume data set which is not the last trailer label 1
03	Label Number <ul style="list-style-type: none">Always = 2
04	Record Format <ul style="list-style-type: none">Always = U for undefined length
05-09	Block Length <ul style="list-style-type: none">Always = 02048
10-14	Record Length <ul style="list-style-type: none">Always = 00000 for the records varying in length
15-49	Not Used <ul style="list-style-type: none">Always = blanks
50-51	Buffer Offset <ul style="list-style-type: none">Always = 00
52-79	Not Used <ul style="list-style-type: none">Always = blanks

6.4 Export Specifications

Introduction

Cataloging export converts bibliographic and authority records to the OCLC-MARC format. It writes that record to a file or directs it to a communications port.

Export characteristics: bibliographic records

Exported bibliographic records have the same format and character set as OCLC-MARC records output to tape cartridge.

The following applies to exported bibliographic records:

- Maximum size = 6,144 characters
- There are no tape cartridge-specific characteristics such as reel size or tape cartridge labels
- In the 003 field, except for original cataloging records from CatCD, all other records contain OCLC's organization symbol: *OCoLC*
- The 005 field contains the date and time the export was executed
- Byte 22 of the leader carries one of the following values:
 - *b* for exported via CORC
or
 - *e* for exported via Cataloging service or OCLC Selection
or
 - *x* for exported via OCLC Arabic Cataloging software, OCLC CatCD for Windows, OCLC CatME for Windows, or OCLC CJK software

6.4 Export Specifications (continued)

Export characteristics: bibliographic records (continued)

The following table details what is and is not included on exported bibliographic records:

Item	Included on Tape Cartridge/Exported Records	Not Included on Tape Cartridge/Exported Records
User Option Data	User option data input at the workstation in the 910 field	User option data specified in the institution's profile
Call Numbers	All call numbers present in the bibliographic record when Produce or Update are performed	For Replace (<i>rep</i> Update) transactions: 090 (if record contains 050), 092 (if record contains 082), 096 (if record contains 060), 098, and 099
Dates	Date record was created and date institution performed a Produce and Send or Update and Send on the record	Date of last use of record, before the institution's use of record, and the date of the revision
Print Constants		Print constants supplied by card print
Local Fields	<ul style="list-style-type: none"> For Produce or Update transactions other than Replace (<i>rep</i> Update): local fields present in the bibliographic record when Produce or Update are performed For Replace (<i>rep</i> Update) transactions: local default 049, 69x, and 94x 	For Replace (<i>rep</i> Update) transactions: any field not present in the master record: 009, 059, 098, 099, 590, 690, 691, 79x, 910, and 945–949

Export characteristics: bibliographic format equivalents

The following table shows the field and position of each fixed-field element in the OCLC-MARC bibliographic record.

Mnemonic	Definition	Field and Position
AccM	Accompanying Matter (VIS)	008/23–27
AccM	Accompanying Matter (SCO and REC)	008/24–29
Alph	Original Alphabet or Script of Title	008/33
Audn	Target Audience	008/22
Biog	Biography	008/34
BLvl	Bibliographic Level	Leader/07
Comp	Form of Composition	008/18–19
Conf	Conference Publication	008/29
Cont	Nature of Contents (BKS)	008/24–27
Cont	Nature of Contents (SER)	008/25–27
CrTp	Type of Cartographic Material	008/25
Ctrl	Type of Control	Leader/08
Ctry	Country of Publication, Production, or Execution	008/15–17
Dates	Date 1 and Date 2	008/07–10 and 008/11–14
Desc	Descriptive Cataloging Form	Leader/18

6.4 Export Specifications (continued)

**Export characteristics:
bibliographic format
equivalents (continued)**

Mnemonic	Definition	Field and Position
DtSt	Type of Date/Publication Status	008/06
Elvl	Encoding Level	Leader/17
Entered	Date Entered	008/00–05
EntW	Nature of Entire Work	008/24
Fest	Festschrift	008/30
File	Type of Computer File	008/26
Fmus	Format of Music	008/20
Form	Form of Item (BKS, SER, MIX, SCO, and REC)	008/23
Form	Form of Item (VIS and MAP)	008/29
Freq	Frequency	008/18
Gpub	Government Publication	008/28
Ills	Illustrations	008/18–21
Indx	Index	008/31
ISSN	ISSN Center	008/20
Lang	Language	008/35–37
LitF	Literary Form	008/33
LTxt	Literary Text for Sound Recordings	008/30–31
Mrec	Modified Record Code	008/38
OCLC	OCLC Control Number	001/03–10
Orig	Form of Original Item	008/22
Prme	Prime Meridian	008/24
Proj	Projection	008/22–23
Rec stat	Record Status	Leader/05
Regl	Regularity	008/19
Relf	Relief	008/18–21
S/L	Entry Convention	008/34
SpFm	Special Format Characteristics	008/33–34
Srce	Cataloging Source Code	008/39
SrTp	Type of Continuing Resource	008/21
Tech	Technique	008/34
Time	Running Time	008/18–20
Tmat	Type of Material	008/33
Type	Type of Record	Leader/06

6.4 Export Specifications (continued)

Export characteristics: authority records Authority records are not validated before conversion. Exported authority records have the same format and character set as OCLC-MARC tape cartridge records.

The following applies to exported authority records:

- Maximum size = 12,000 characters
- In the 003 field, except for original cataloging records from CatCD, all other records contain OCLC's organization symbol: *OCoLC*
- The 005 field contains the date and time the export was executed
- Byte 22 of the leader carries one of the following values:
 - *b* for exported via CORC
or
 - *e* for exported via Cataloging service
or
 - *x* for exported via OCLC Arabic Cataloging software, OCLC CatCD for Windows, OCLC CatME for Windows, or OCLC CJK software

Export characteristics: authority format equivalents The following table shows the field and position of each fixed-field element in the OCLC-MARC authority record.

Mnemonic	Definition	Field and Position
Auth/Ref	Kind of Record	008/09
Auth status	Level of Establishment	008/33
Enc lvl	Encoding Level	Leader/17
Entered	Date Entered on File	008/00–05
Geo subd	Direct or Indirect Geographic Subdivision	008/06
Govt agn	Type of Government Agency	008/28
Mod rec	Modified Record	008/38
Name	Undifferentiated Personal Name	008/32
Name use	Heading Use—Main or Added Entry	008/14
Rec stat	Record Status	Leader/05
Ref status	Reference Evaluation	008/29
Roman	Romanization Scheme	008/07
Rules	Descriptive Cataloging Rules	008/10
Ser num	Numbered/Unnumbered Series	008/13
Ser use	Heading Use—Series Added Entry	008/16
Series	Type of Series	008/12
Source	Cataloging Source	008/39
Subj	Subject Heading System/Thesaurus	008/11
Subj type	Type of Subject Subdivision	008/17
Subj use	Heading Use—Subject Added Entry	008/15
Type	Type of Record	Leader/06
Upd status	Record Update in Process	008/31

6.4 Export Specifications (continued)

Export characteristics: holdings records Exported holdings records have the same format and character set as OCLC-MARC tape cartridge records. Each tape cartridge contains:

- Full bibliographic records
- SIHD (Summary-institutions holdings data) holdings information
- SCHED (Summary-copy holdings data) holdings information, if ordered

The bibliographic record is preceded by its associated holdings records in institution symbol order. The following applies to exported holdings records:

- Maximum size = 6,144 characters
- The 004 field contains the control number for the parent bibliographic record
- The 008 field contains the fixed length data elements

Export characteristics: holdings format equivalents The following table shows the field and position of each element in the OCLC-MARC holdings record.

Union List Display	Definition	Field and Position
CLNO ‡a	Class number	852 ‡h
CLNO‡b	Book number	852‡l
Copy:	Copy number	852 ‡t
Hld lib:	Holding library code	852 ‡b
OCLC no:	OCLC Control Number	004
SCHD ‡d	Date of Report	008/26–31
SIHD ‡d		
SCHD ‡e	Acquisition Status Code	008/06
SIHD ‡e		
SCHD ‡f	Retention Code	008/12
SIHD ‡f		
SCHD ‡g	Completeness Code	008/16
SCHD ‡v	Enumeration code	852 ‡a
SIHD ‡v		
SCHD ‡y	Chronological data	866 ‡a
SIHD ‡y		
SCHD ‡n	Local notes	866 ‡z
SIHD ‡n		
SIHD ‡a	OCLC institution symbol	852 ‡a

Export transfer specifications

You may export record-by-record or accumulate the records in a microcomputer-resident file for batch transfer.

6.5 Record Sequence

Introduction

This section describes the record sequence on tape cartridges for two OCLC services. For both services, a field terminator and a record terminator follow the last field in each record.

OCLC-MARC Subscription service

Subscription service bibliographic records are arranged in chronological order (that is, records are on tape cartridge in the same order in which they were used). Records on multi-institution tape cartridges are in chronological order, intermixed with records for all institutions.

Serial Union List

Serial Union List tape cartridges contain bibliographic records listed in numeric order by OCLC control number. The associated holdings records in institution symbol order follow each bibliographic record. Copy-specific holdings records, if present, follow each institution's composite holdings record.