

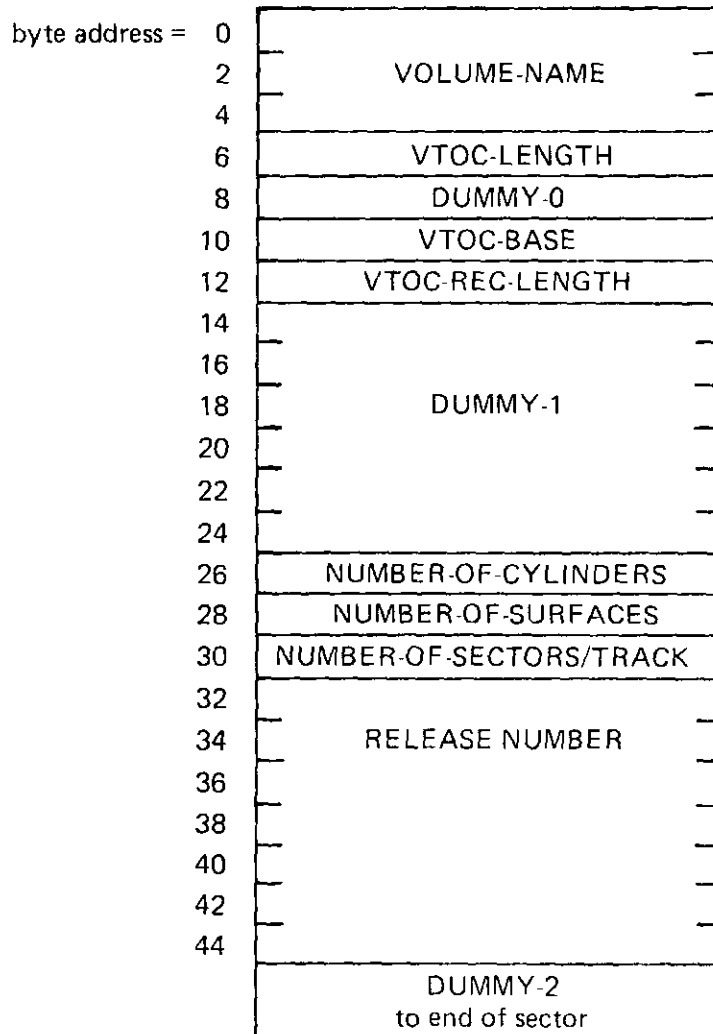
APPENDIX F: VOLUME LABEL AND VTOC FORMATS

F.1 Volume label

The volume label is located at the beginning of all disks and flexible disks.

Disk model	
PTS 6875 } PTS 6876 }	Cylinder 0, track 0, sector 0
Flexible disk	Track 0, sectors 1-4 inclusive

The format of the volume label is shown below:



The fields have the following meaning:

VOLUME NAME

This is a string of 6 characters, left adjusted and padded with spaces. No spaces are allowed within the volume name.

VTOC-LENGTH

Number of sectors occupied by the VTOC.

DUMMY-0

Reserved for future use.

VTOC-BASE

The address of the sector on which the VTOC starts.

VTOC-REC-LENGTH

The size of one VTOC record, in bytes. The status character is not included.

DUMMY-1

Reserved for system use.

NUMBER-OF-CYLINDERS

The number of cylinders available to the user.

NUMBER-OF-SURFACES

For each surface of the disk there is only one track per cylinder. This field therefore shows the number of tracks per cylinder.

NUMBER-OF-SECTORS/TRACK

As stated.

RELEASE NUMBER

This field contains the text 'TOSS REL x.y.' where x is the release number and y is the level.

DUMMY-2

Filler to the end of the sector.

F.2 Volume Table of Contents (VTOC)

The VTOC contains two kinds of information about the volume. The first sector of the VTOC contains a table that describes all the free areas (extents) of the volume. The rest of the VTOC contains records that describe the used areas of the volume. The first is called the 'Free Space Administration Table', the second is called 'VTOC records'.

F.2.1 Free space administration table

This table has 50 entries that describe the start address length of all free extents on the volume. The format of each entry is shown below. Unused entries contain all zeros (X '00').

byte address =	0	DUMMY-0
	2	EXTENT LENGTH
	4	DUMMY-1
	6	EXTENT-BASE

The fields have the following meaning:

DUMMY-0

Reserved for future extensions.

EXTENT LENGTH

The size of the free extent, expressed in number of sectors.

DUMMY-1

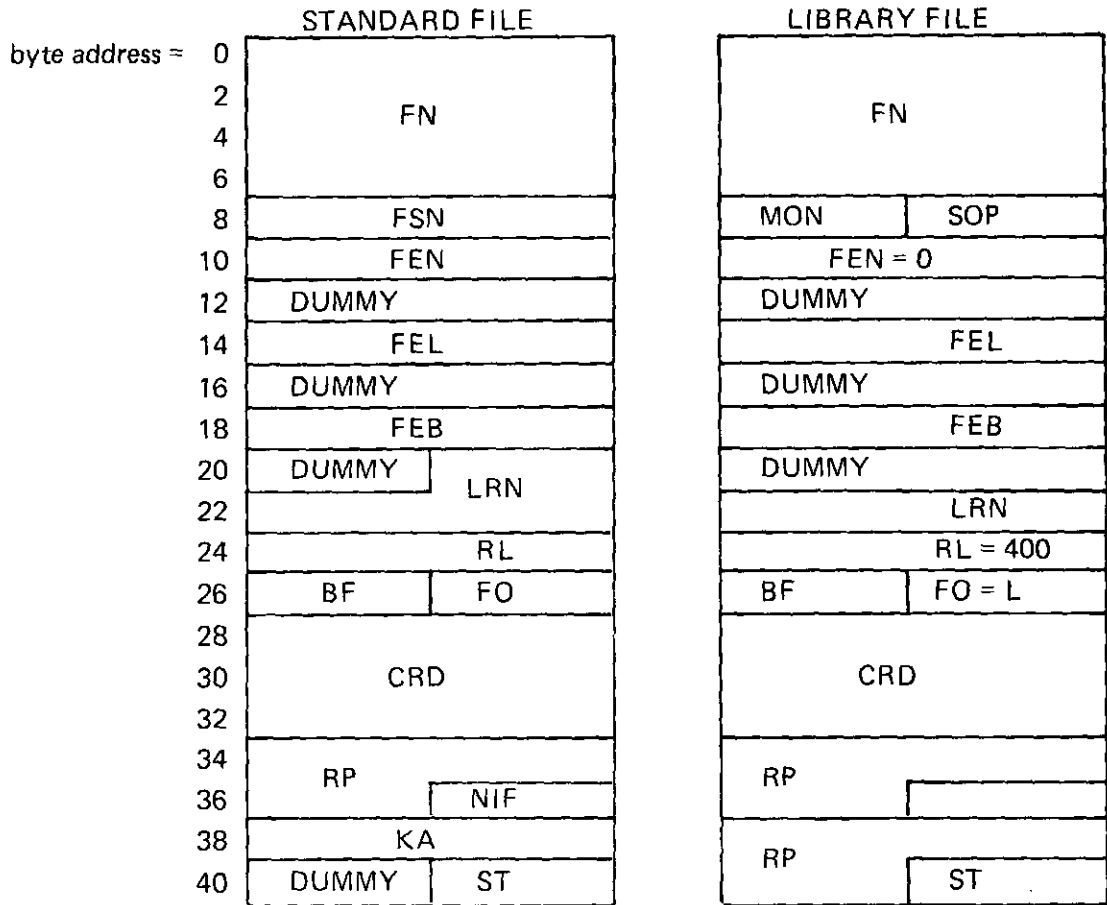
Reserved for future extensions.

EXTENT BASE

Logical record number of the first sector in this free extent.

F.2.2 VTOC records

Each record is 41 bytes long (40 bytes data + 1 byte status) and they are blocked 9 per sector. One record exists for every used extent in each file. There are two formats for VTOC records, one for standard files, one for library files, as shown below.



The fields have the following meaning:

FN = File Name

A string of 8 characters, left-adjusted and padded with spaces. This field must be set to spaces (X '20') for unused entries. No spaces are allowed within the File Name.

FSN = File Section Number

Two bytes binary value numbering the file sections. A file section is that part of a file which resides on one volume. File-section-nr starts from zero. The field contains other information for library file (see below).

FEN = File Extent Number

Two bytes binary value numbering the extents within each file-section. File-extent-nr starts from zero.

Dummy

Reserved for future extensions. All dummies will contain null characters, X '00'.

FEL = File Extent Length

A binary value that represents the number of sectors in the file extent.

FEB = File Extent Base

A binary value representing the logical sector number of the first sector in the extent.

LRN = Last Record Number

A binary value representing the logical record number of the last 'used' record in the file. There could be 'free' records in the file between the LRN and end-of-file.

RL = Record Length

A binary value representing the number of bytes occupied by the record. This is fixed for all records in this file and does not include the status byte.

BF = Blocking Factor

A binary value representing the number of records per block (i.e. per sector).

FO = File Organization

One character representing the file type. It can be:

- S for standard files
- L for library files
- B for 'Bad spot' files
- X for non-standard files

NIF = Number of Index Files

This is a binary value representing the number of index files belonging to this file.

KA = Key Address

This is a binary value representing the position of the first character of the symbolic key in the data file record. This field is only used for index files and is set to zero for other types of file.

ST = Status

This is a single character that indicates whether this VTOC record is used (X 'FF') or free (X '00'). This character is not included in the VTOC-REC-LENGTH defined in the volume label.

CRD = Creation Date

A string of 6 characters representing the date of creation of the file. The format can be either YYMMDD or YYDDD, left adjusted, where

YY = last two digits of the year
MM = month in the year
DD = day in the month
DDD = day in the year.

RP = Retention period

This is a string of 3 characters representing the number of days that this file is to be retained.

MON = Monitor number

This is a binary value representing the Monitor that is to be used together with the application library file. If the file is a monitor library file the monitor number should also be set to the appropriate value. The range of values is 1 to 99 inclusive.

SOP = SOP switch number

This is a binary value representing the SOP switch to be used for loading the application library file. This should be zero if the file is a monitor library file. The range of values is 0 to 10 inclusive.

