

5444/5447 Volume Label

This is a 1-sector (256-byte) area located in the third sector of cylinder 0 on any 5444. The system directory (hex 0B-51) reflects the status and locations of the source and object libraries.

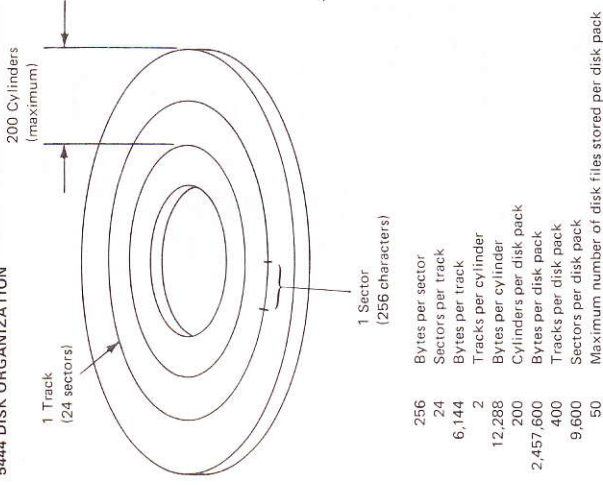
Disp Hsx	Label	Lng Dec	Description
00-02	VLID	3	Label identifier (VOL)
03-08	VLNAME	6	Volume identifier, 1-6 characters
09-0A	VLVTO	2	Volume table of contents (VTOC) pointer (C/S)
0B-0C	VLDPN	2	Source directory pointer (C/S); hex FF00 indicates no library exists
0D-0E	VLNAS	2	Next available source library sector (C/S)
0F-10	VLEOL	2	End of source library (C/S)
11-12	VLDRS	2	Number of directory sectors in source library
13-14	VLPLS	2	Number of permanent source library sectors

5444/5447 SYSTEM RESIDENT PACK ORGANIZATION

Cylinder	Sector	Contents
0	00	IPLBOT (IPL bootstrap)
0	04	Configuration record
0	08	Volume label—system directory
0	0C-20	OBR/SDR logging area
0	24-28	VTOC directory
0	2C-5C	VTOC format 1's and 7's
0	80-AC	Reserved
0	B0-B8	Rollout area for CDUMPD
0	BC-D8	IPLNIP (IPL nucleus initialization program)
0	DC	PTF logging area
1-3		Alternate tracks
Variable	Variable	Basic system work area, basic system program file (coresident only)
Variable	Variable	Source library
Variable	Variable	Scheduler work areas
Variable	Variable	Maximum program level rollout area
Variable	Variable	Object library directory
Variable	Variable	Object library
Variable	Variable	User file area
CB	00-DC	CE use

To find the source library, SWA, maximum program level rollout area, object library directory, and the object library, refer to the C/S pointer in the volume label. There is also a C/S pointer in SYSCOM for the SWA and the object library.

5444 DISK ORGANIZATION



256	Bytes per sector
24	Sectors per track
6,144	Bytes per track
2	Tracks per cylinder
12,288	Bytes per cylinder
200	Cylinders per disk pack
2,457,600	Bytes per disk pack
400	Tracks per disk pack
9,600	Sectors per disk pack
50	Maximum number of disk files stored per disk pack

VTOC FILE LABEL FORMAT 1 (5444/5447)

Disp Hex	Label	Lng Dec	Description
00	F1TAG	1	Tag ID of index pointer
01-02	F1CHAN	2	Chain address
03-0A	F1 LABEL	8	File label
0B-10	F1DATE	6	Date of file
11	F1RTIN	1	Retain indicator for file
12-13	F1TYPE	2	Data management file types

The following information is in SWA and VTOC:

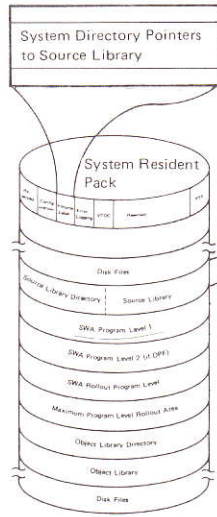
Status when file was created:

Hex Value	Meaning
0080	Indexed
0040	Sequential
0020	Update
0010	MVF
0008	Last pack for MVF
0004	Sequential add
0002	Random add
0001	Unordered add

14-15	F1RECL	2	Record length
16	F1KEYL	1	Key length
17-18	F1KEYO	2	Key location
19-1B	F1LSTR	3	Address of last record (C/S/D)
1C-1E	F1LSTK	3	Address of last key (C/S/D)

Disp Hex	Label	Lng Dec	Description
15-16	VLACT	2	Number of active source library sectors
17-18	VLA VL	2	Number of available source library sectors
19-24	VLRES1	12	Reserved
25-26	VLD RP	2	Object library directory pointer (C/S); hex FF00 indicates no library exists
27-28	VLEOD	2	End of object directory (C/S)
29-2A	VLSOL	2	Start of object library (C/S)
2B-2C	VLAEL	2	Allocated end of object library (C/S)
2D-2E	VLEEL	2	Extended end of object library (C/S)
2F-30	VLAPE	2	Number of available directory entries in object library directory
31-32	VLATE	2	Number of available temporary directory entries
33-35	VLFTD	3	First temporary directory entry in object library directory (C/S/D)
36-38	VLNAT	3	Next available temporary directory entry in object library directory (C/S/D)
39-3A	VLNAL	2	Next available object library sector for permanent entries (C/S)
3B-3C	VLALT	2	Next available object library sector for temporary entries (C/S)
3D-3E	VLASP	2	Number of available object library sectors for permanent entries
3F-40	VLAST	2	Number of available object library sectors for temporary entries
41-42	VLALS	2	Number of active object library sectors
43-44	VLAOP	2	Number of active O-type permanent sectors
45-46	VLARP	2	Number of active R-type permanent sectors
47	VLVSYS	1	Valid system indicator; hex 80 indicates commercial system
48-49	VLARR	2	Rollout/rollin area pointer (C/S)
4A	VLSRR	1	Rollout/rollin area size
1-20			

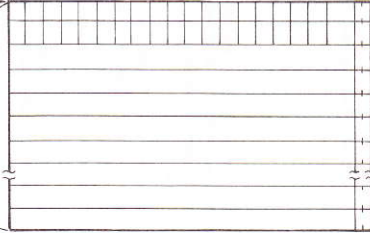
Volume Label



13-Byte Directory Entry

S or P1	Name of Source Program or Procedure	C/S of First Sector in Chain	C/S of Last Sector in Chain	Number of Sectors in Chain ²
1	2	7	8 9 10 11	12 13

19 Directory Entries in Each Directory Sector



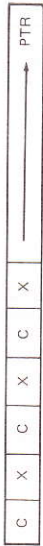
- ¹ Source or procedure.
- ² High-order bit indicates:
1 = Permanent
0 = Temporary

The 2-byte address (C/S) points to the next sector in the chain if the chain continues. If this is the last sector in the chain, the last 2 bytes contain hex FFFF.

Source Library Format

Source library modules are in compressed format. Each 96-byte source statement is compressed as it is entered into the source library. The actual length of each statement in the source library is variable.

The compressed format is:



- C = Actual hexadecimal character as it appears in the decompressed record
- X = The number of times the character is repeated minus one (if repeated)
- PTR = The last 2 bytes of a sector containing the C/S address of the next source library sector for this module. A pointer of hex FFFF indicates the end of the module

The X factor is placed in the compressed record if the character is repeated. The largest X factor is hex 3F. If a character is repeated more than 64 times, the character requires more than one X factor. To be placed in the source library, a character must be hex 40 or greater so that it does not conflict with the X factor.

For example, an END source statement followed by 90 blanks requires 10 bytes in the source library:



Object Library

The object library consists of a directory area and module area. The object library size is specified to the library maintenance program when the library is allocated. The upper boundary of the library can be extended, if necessary, to add more temporary modules.

The object library directory contains a 21-byte entry for each module in the library.

Whenever a permanent module is added to the library, or the library is reorganized, all temporary modules are deleted.

