VCB structure

#include <Files.h>

typedef struct **VCB** {

		Size	Offset	Description
struct QElem * qLink;		4	0	Address of next queue element (0=last)
short	qType;	2	4	Always fsQType (5)
short	vcbFlags;	2	6	Bit 15=1 when volume needs flushing (dirty)
unsigned short	vcbSigWord;	2	8	File sys signature: 0x4244=HFS, 0xD2D7 = flat
unsigned long	vcbCrDate;	4	10	Date/Time of initialization
unsigned long	vcbLsMod;	4	14	Date/Time of last modification *
short	vcbAtrb;	2	18	Volume Attributes
unsigned short	vcbNmFls;	2	20	Number of files in the root directory
short	vcbVBMSt;	2	22	Sector of start of volume bit map *
short	vcbAllocPtr;	2	24	(internal: start looking for free space here) *
unsigned short	vcbNmAlBlks;	2	26	Total allocation blocks on volume *
long	vcbAlBlkSiz;	4	28	Size of an allocation block, in bytes
long	vcbClpSiz;	4	32	Default clump size, in bytes
short	vcbAlBlSt;	2	36	First sector represented in bit map (flat vols)
long	vcbNxtCNID;	4	38	Next serial number for new file or dir *
unsigned short	vcbFreeBks;	2	42	Number of unused allocation blocks
Str27	vcbVN;	28	44	Length-prefixed volume name
short	vcbDrvNum;	2	72	Drive number
short	vcbDRefNum;	2	74	Driver reference number
short	vcbFSID;	2	76	File system ID (0=native; else=external)
short	vcbVRefNum;	2	78	Volume reference number
Ptr	vcbMAdr;	4	80	Address in memory of block bit map
Ptr	vcbBufAdr;	4	84	Address of volume I/O buffer
short	vcbMLen;	2	88	Size of block bit map, in bytes
short	vcbDirIndex;	2	90	(used internally)
short	vcbDirBlk;	2	92	(used internally) (* last field if MSF present)
unsigned long	vcbVolBkUp;	4	94	Date/Time of last backup
unsigned short	vcbVSeqNum;	2	98	Sequence number (if this is a backup diskette)
long	vcbWrCnt;	4	100	Volume write count
long	vcbXTClpSiz;	4	104	Clump size of extents tree file
long	vcbCTClpSiz;	4	108	Clump size of catalog tree file
unsigned short	vcbNmRtDirs;	2	112	Number of directories in the root
long	vcbFilCnt;	4	114	Total number of files on the volume
long	vcbDirCnt;	4	118	Total number of directories on the volume
long	vcbFndrInfo[8];	32	122	Data used by Finder
			122	(long) dirID of the 'blessed folder'
			126	(long) dirID of directory of startup application
			130	(long) dirID of first folder in Finder chain

			. . .	(other undocumented fields)
unsigned short	vcbVCSize;	2	154	Size of volume cache (undocumented)
unsigned short	vcbVBMCSiz;	2	156	Size of vol block map cache (undocumented)
unsigned short	vcbCtlCSiz;	2	158	Size of common cache for vol info (undoc'ed)
unsigned short	vcbXTAlBlks;	2	160	Size of extents tree file, in blocks
unsigned short	vcbCTAlBlks;	2	162	Size of catalog tree file, in blocks
short	vcbXTRef;	2	164	Path reference number of extents tree file
short	vcbCTRef;	2	166	Path reference number of catalog tree file
Ptr	vcbCtlBuf;	4	168	Address of extents and catalog tree caches
long	vcbDirIDM;	4	172	dirID of directory last searched
short	vcbOffsM;	2	176	Offspring index at last search
} **VCB** ;		178		

Notes: The states of vcbDRefNum and vcbDrvNum can be used to see if a volume is currently on-line, off-line, or ejected:

On-line: vcbDRefNum < 0 and vcbDrvNum > 0

Off-line: vcbVDRefNum < 0 and vcbDrvNum = 0

Ejected: vcbVDRefNum = 0 and vcbDrvNum > 0

The 'blessed' folder for this volume, found at vcbFndrInfo[0], is the folder which contains the system resource file and the Finder. Use **SysEnvirons** or **FindFolder** to find the 'blessed' folder which contains the *currently open* system resource file.

The global variable VCBQHdr contains the queue header for the chain of volume control blocks. The global variable DefVCBPtr points to the VCB of the current default volume (see **PBSetVol**).

Use **GetVCBQHdr** to access the start of the volume queue. We are encouraged to avoid 'walking' the VCB queue since you can use **PBGetVInfo** to index through all volumes.

64K ROM Note: A volume control block created for a flat volume is a subset of the above structure. It's actually smaller and contains only the fields up to and including vcbDirBlk. In addition, the names of several fields have been changed to reflect the fact that they contain different information on hierarchical volumes: vcbLsBkUp, vcbDirSt, vcbBlLn, vcbNumBlks, and vcbNexFNum have been changed to vcbLsMod, vcbVBMSt, vcbAllocPtr, vcbNmAlBlks, and vcbNxtCNID, respectively. The name vcbLsBkUp was actually a misnomer; this field has always contained the date and time of the last modification, not the last backup. Another field, vcbVolBkUp, contains the date and time of the last backup.