Chessmaster OBK format

The file is made up of three sections: the header, the moves and then notes/text.

Header (12 bytes)

Fixed text

Four bytes: BOO! or in hex:

[42] [4F] [4F] [21]

Move count

Four bytes in little endian encoding, giving the total number of moves.

For example in CMX.OBK the first eight bytes of the file are:

[42] [4F] [4F] [21] [6E] [59] [04] [00]

meaning there are 0004596E moves (285,038 in decimal).

Text/notes count

Four bytes in little endian encoding, giving the total number of bytes of names and notes (including the note data for move number, length and type). This might be zero.

Moves (2 bytes per move)

Each move is made up of two bytes with bits set as:

1	1	0	0	1	1	0	0
V	L	From Rank			From File		

1	1	0	1	1	1	0	0
Weight		To Rank			To File		

V:	Last move in variation	(1 is yes)
L:	Last move at this level	(1 is yes)
Rank:	The rank on the board	(0..7 meaning 1..8)
File:	The file on the board	(0..7 meaning A..H)
Weight:	Value of the move	(0..3 meaning 0,25,50,100)

The example above (CC DC in hex) shows E2-E4 with weight 100. It is the last move in the variation and there are no more alternative moves at the same level.

Move Order

Because the moves do not contain pointers to the next or alternative moves the order of the moves in the file is important.

Moves are stored in a sequence up until the end of that opening variation at which point the "V" bit is set to 1. Within that sequence some moves will have the "L" bit set to 1, meaning that there are no alternatives, and some will have "L" as zero meaning there is at least one alternative move.

Following that variation the next set of moves will be stored, again up until the end of the variation ("V" set to 1) and again containing moves with "L" set to 1 or 0.

The variations are arranged so that each one follows on from the most recent move with "L" set to 0.

For example a very basic opening book might have:

	V	L	Move	
Opening move	0	0	e2e4	Branch 1
	0	0	e7e5	Branch 2
	0	1	g1f3	
	0	1	b8c6	
	0	0	f1c4	Branch 3
	1	1	f8c5	
Alternative for Branch 3	0	0	f1b5	Branch 4
	0	1	a7a6	
	1	1	b5a4	
Alternative for Branch 4,3	0	1	b1c3	
	1	1	g8f6	
Alternative for Branch 2	0	1	c7c5	
	0	1	g1f3	
	0	1	d7d6	
	1	1	d2d4	
Alternative for Branch 1	0	0	d2d4	Branch 5
	1	1	d7d5	
Alternative for Branch 5,1	1	1	c2c4	

This represents the opening book:

e2e4	e7e5	g1f3	b8c6	f1c4	f8c5	
:	:	:	:	f1b5	a7a6	b5a4
:	:	:	:	b1c3	g8f6	
:	c7c5	g1f3	d7d6	d2d4		
d2d4	d7d5					
c2c4						

Notes (6 bytes plus text per note)

Notes are made up of four bytes for the move number (in little endian), one byte for the note length and then a byte for the note type. After this comes the actual note text.

Note types:
- 80 Variation name
- 81 Move annotation
- 82 EOC code

For example an annotation for move 1 could be:

01 00 00 00 06 81 'M' o' 'v' 'e' ' ' '1'