

Format of Qemulator Mdump 1&2 files

The image file comprises of a 46 byte header followed by up to 255 sectors of 528 bytes each. (530 in mdump2 images)

			Mdump1	Mdump2 if different
<u>Header Format</u>				
\$00	8 bytes	ID "mdv*Dump"		
\$08	4 bytes	Header length (for versioning)	34 bytes	
\$0C	4 bytes	Offset of MDV sector data	46	
\$10	2 bytes	Bytes per MDV Sector	528	530
\$12	1 byte	Number of sectors in dump		
\$13	1 byte	Number of sectors in original MDV		
\$14	4 bytes	Offset of sector renumbering table (or null)	0	
\$18	4 bytes	Offset of sector map (or null)	0	
\$1C	4 bytes	Offset of global sector header (or null)	0	
\$20	4 bytes	Dump type/extension: Pointer to linked list of extensions (or null)	0	
\$24	4 bytes	Flags	1	2
\$28	2 bytes	Offset of sector data	16	
\$2A	2 bytes	Offset of sector header (or negative)	0	
\$2C	2 bytes	Offset of block header (or negative)	14	

Sector Format

The first sector is sector 0 (map) followed by the highest good sector, and counting down to sector 1
And Mdump2 images may have sectors stored out of sequence.

Sector Header

\$00	1 byte	Sector header flag \$FF
\$01	1 byte	Sector number
\$02	10 bytes	Cartridge name
\$0C	2 bytes	Random number

Block Header

\$0E	1 byte	File number
\$0F	1 byte	Block number

Data Block

\$10	512 bytes	Data
\$210	2 bytes	Checksum (only Mdump2, 'wrong' way round MSB first)

Bad sector buffer Mdump2 only

The Dump type/extension entry (\$20), in the image header is a pointer to

\$00	4 bytes	Pointer to next extensions (or null)
\$04	4 bytes	ID "MBAD"
\$08	4 bytes	Pointer to start of bad cache
\$0C	2 bytes	Number of buffered bad sectors

Format of Qlay .MDV images

The image file is made up of 255 sectors of 686 bytes (174,930 bytes) composed as follows -

Sector Format

The first sector is sector 0 (map) followed by sectors in ascending, or descending order. And may also be out of sequence.

Unused (bad sectors)

Sector Header

\$000	10 bytes	Sector header preamble, 10 * \$00	
\$00A	2 bytes	Sector header preamble, \$FFFF	
\$00C	1 byte	Sector header flag \$FF	\$00
\$00D	1 byte	Sector number	\$00
\$00E	10 bytes	Cartridge name	10 * \$00
\$018	2 bytes	Random number	\$0000
\$01A	2 bytes	Checksum	\$0F0F

Block Header

\$01C	10 bytes	Block header preamble, 10 * \$00	
\$026	2 bytes	Block header preamble, \$FFFF	
\$028	1 byte	File number	\$00
\$029	1 byte	Block number	\$00
\$02A	2 bytes	Checksum	\$0F0F

Data Block

\$02C	6 bytes	Data preamble, 6 * \$00	
\$032	2 bytes	Data preamble, \$FFFF	
\$034	512 bytes	Data	512 * \$00
\$234	2 bytes	Checksum	\$0F0F
\$236	120 bytes	Inter sector gap, 120 * \$5A	
\$2AE		End	

Format of MDI image files

The MDI image file is made up of 255 sectors of 534 bytes (136,170 bytes) composed as follows -

Sector Format

The first sector is sector 0 (map) followed by sectors in ascending order.

Sector Header

\$00	1 byte	Sector header flag \$FF
\$01	1 byte	Sector number
\$02	10 bytes	Cartridge name
\$0C	2 bytes	Random number
\$0E	2 bytes	Checksum

Block Header

\$10	1 byte	File number
\$11	1 byte	Block number
\$12	2 bytes	Checksum

Data Block

\$14	512 bytes	Data
\$214	2 bytes	Checksum

Any sectors marked as bad in the map, may not contain valid sector data.