

# MyBunnyhug

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This page documents the Akai MPC 1000 PGM file format version 1.00. This information is provided to help developers create software for the MPC 1000. If information from this page is used in an application, I would love to hear about it.

Send me an e-mail at [stephen@mybunnyhug.org](mailto:stephen@mybunnyhug.org) if you have any questions or comments.

Take a look at [my other projects!](#)

## Sample Code

Download sample MPC 1000 file loading and exporting Python code from <https://github.com/stephenn/pympc1000>.

## File Layout Overview

The MPC 1000 PGM file format has five sections: Header, Sample and Pad, MIDI, Slider, and Footer.

Up to four samples can be assigned to each of the sixty-four pads.

Header
Pad 0 Sample 0
Pad 0 Sample 1
Pad 0 Sample 2
Pad 0 Sample 3
Pad 0
Pad 1 Sample 0
Pad 1 Sample 1
Pad 1 Sample 2
Pad 1 Sample 3
Pad 1
...
Pad 63 Sample 0
Pad 63 Sample 1
Pad 63 Sample 2
Pad 63 Sample 3
Pad 63
MIDI
Slider 0
Slider 1

## File Information and Conventions

All file values are encoded as little-endian 2's complement or ASCII.

### Symbol Definitions:

Symbol	Description	Range
p	Pad number	0 - 63
s	Sample number	0 - 3
n	MIDI note number	0 - 127
r	Slider number	0 - 1

## File Layout

### Header:

Offset	Size	Description
0x00	2	File size in bytes
0x02	2	Padding
0x04	16	Filetype String
0x14	4	Padding

### Sample Data:

Offset	Size	Description
(p * 0xA4) + (s * 0x18) + 0x00	16	Sample Name
(p * 0xA4) + (s * 0x18) + 0x10	1	Padding
(p * 0xA4) + (s * 0x18) + 0x11	1	Level
(p * 0xA4) + (s * 0x18) + 0x12	1	Range Lower
(p * 0xA4) + (s * 0x18) + 0x13	1	Range Upper
(p * 0xA4) + (s * 0x18) + 0x14	2	Tuning
(p * 0xA4) + (s * 0x18) + 0x16	1	Play Mode
(p * 0xA4) + (s * 0x18) + 0x17	1	Padding

### Pad Data:

Offset	Size	Description
(p * 0xA4) + 0x60	2	Padding
(p * 0xA4) + 0x62	1	Voice Overlap
(p * 0xA4) + 0x63	1	Mute Group
(p * 0xA4) + 0x64	1	Padding
(p * 0xA4) + 0x65	1	Unknown

(p * 0xA4) + 0x66	1	Attack
(p * 0xA4) + 0x67	1	Decay
(p * 0xA4) + 0x68	1	Decay Mode
(p * 0xA4) + 0x69	2	Padding
(p * 0xA4) + 0x6B	1	Velocity to Level
(p * 0xA4) + 0x6C	5	Padding
(p * 0xA4) + 0x71	1	Filter 1 Type
(p * 0xA4) + 0x72	1	Filter 1 Freq
(p * 0xA4) + 0x73	1	Filter 1 Res
(p * 0xA4) + 0x74	4	Padding
(p * 0xA4) + 0x78	1	Filter 1 Velocity to Frequency
(p * 0xA4) + 0x79	1	Filter 2 Type
(p * 0xA4) + 0x7A	1	Filter 2 Freq
(p * 0xA4) + 0x7B	1	Filter 2 Res
(p * 0xA4) + 0x7C	4	Padding
(p * 0xA4) + 0x80	1	Filter 2 Velocity to Frequency
(p * 0xA4) + 0x81	14	Padding
(p * 0xA4) + 0x8F	1	Mixer Level
(p * 0xA4) + 0x90	1	Mixer Pan
(p * 0xA4) + 0x91	1	Output
(p * 0xA4) + 0x92	1	FX Send
(p * 0xA4) + 0x93	1	FX Send Level
(p * 0xA4) + 0x94	1	Filter Attenuation
(p * 0xA4) + 0x95	15	Padding

## MIDI Data:

Offset	Size	Description
0x2918 + p	1	Pad MIDI Note Values
0x2958 + n	1	MIDI Note Pad Values
0x29D8	1	MIDI Program Change

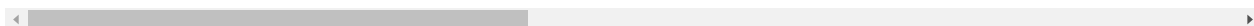
## Slider Data:

Offset	Size	Description
(r * 0x0D) + 0x29D9	1	Slider r Pad
(r * 0x0D) + 0x29DA	1	Unknown
(r * 0x0D) + 0x29DB	1	Slider r Parameter
(r * 0x0D) + 0x29DC	1	Slider r Tune Low
(r * 0x0D) + 0x29DD	1	Slider r Tune High
(r * 0x0D) + 0x29DE	1	Slider r Filter Low
(r * 0x0D) + 0x29DF	1	Slider r Filter High

(r * 0x0D) + 0x29E0	1	Slider r Layer Low
(r * 0x0D) + 0x29E1	1	Slider r Layer High
(r * 0x0D) + 0x29E2	1	Slider r Attack Low
(r * 0x0D) + 0x29E3	1	Slider r Attack High
(r * 0x0D) + 0x29E4	1	Slider r Decay Low
(r * 0x0D) + 0x29E5	1	Slider r Decay High

Footer Data:

Offset	Size	Description
0x29F3	17	Padding



## File Layout: Python Struct Encoding

The MPC 1000 PGM file format is documented below using Python [struct](#) module format strings.

```
header = (
    '<' # Little-endian
    'H' # File size
    '2x' # Padding
    '16s' # "MPC1000 PGM 1.00"
    '4x' # Padding
)

sample = (
    '<' # Little-endian
    '16s' # Sample Name
    'x' # Padding
    'B' # Level
    'B' # Range Upper
    'B' # Range Lower
    'h' # Tuning
    'B' # Play Mode (0="One Shot", 1="Note On")
    'x' # Padding
)

pad = (
    '<' # Little-endian
    '2x' # Padding
    'b' # Voice Overlap (0="Poly", 1="Mono")
    'b' # Mute Group (0="Off", 1 to 32)
    'x' # Padding
    'B' # Unknown
    'B' # Attack
    'B' # Decay
    'B' # Decay Mode (0="End", 1="Start")
    '2x' # Padding
    'B' # Velocity to Level
    '5x' # Padding
    'b' # Filter 1 Type (0="Off", 1="Lowpass", 2="Bandpass", 3="Highpass")
    'B' # Filter 1 Freq
    'B' # Filter 1 Res
    '4x' # Padding
    'B' # Filter 1 Velocity to Frequency
    'B' # Filter 2 Type (0="Off", 1="Lowpass", 2="Bandpass", 3="Highpass", 4="Link")
    'B' # Filter 2 Freq
    'B' # Filter 2 Res
    '4x' # Padding
    'B' # Filter 2 Velocity to Frequency
    '14x' # Padding
    'B' # Mixer Level
    'B' # Mixer Pan (0 to 49=Left, 50=Center, 51 to 100=Right)
    'B' # Output (0="Stereo", 1="1-2", 2="3-4")
    'B' # FX Send (0="Off", 1="1", 2="2")
)
```

```
'B' # FX Send Level
'B' # Filter Attenuation (0="0dB", 1="-6dB", 2="-12dB")
'15x' # Padding
)

midi = (
  '<' # Little-endian
  '64B' # Pad MIDI note mapping
  '128B' # MIDI note pad mapping
  'B' # MIDI Program Change (0="Off", 1 to 128)
)

slider = (
  '<' # Little-endian
  'B' # Slider Pad
  'B' # Unknown
  'B' # Slider Parameter (0="Tune", 1="Filter", 2="Layer", 3="Attack", 4="Decay")
  'b' # Slider Tune Low
  'b' # Slider Tune High
  'b' # Slider Filter Low
  'b' # Slider Filter High
  'B' # Slider Layer Low
  'B' # Slider Layer High
  'B' # Slider Attack Low
  'B' # Slider Attack High
  'B' # Slider Decay Low
  'B' # Slider Decay High
)

footer = (
  '<' # Little-endian
  '17x' # Padding
)
```

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