

GENMDM MIDI MAPPING QUICK REFERENCE

MIDI Channels

- MIDI Channels 1 to 6 are mapped to the **YM2612 FM sound chip**
 - Each of the 6 channels has 4 FM operators each
 - Channel 6 can be either FM or sample playback
 - There is a global LFO that can modulate each channel
- MIDI Channels 7 to 10 are mapped to the **SN76489 PSG sound chip**
 - Channels 7 to 9 are simple square-wave channels
 - Channel 10 is a noise channel

YM2612 FM Channel Controls – for each channel

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|-----------------------|-------|----------------|
| • Factory presets | CC 09 | data range: 16 |
| • FM algorithm | CC 14 | data range: 8 |
| • FM feedback amount | CC 15 | data range: 8 |
| • Stereo panning | CC 77 | data range: 4 |
| • LFO Amp Mod Amount | CC 76 | data range: 8 |
| • LFO Freq Mod Amount | CC 75 | data range: 8 |
| • Pitch Bend Amount | CC 81 | data range: 18 |

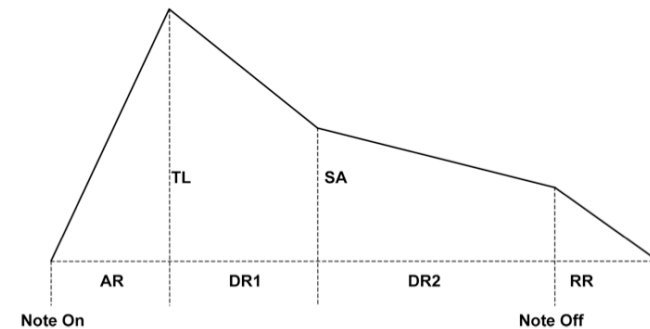
YM2612 FM Global Chip Controls – for the whole chip

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| • LFO Enable | CC 74 | data range: 2 |
| • LFO Speed | CC 01 | data range: 8 |
| • PAL / NTSC Tuning | CC 83 | data range: 2 |

YM2612 FM Operator Control – for each operator that is part of each channel

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|------------------------------|------------|-----------------|
| • Total Level OP1 – OP4 [TL] | CC 16 – 19 | data range: 128 |
| • Multiple OP1 – OP 4 | CC 20 – 23 | data range: 16 |
| • Detune OP1 – OP4 | CC 24 – 25 | data range: 8 |
| • Rate scaling OP1 – OP4 | CC 39 – 42 | data range: 4 |

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| • Attack OP1 – OP4 [AR] | CC 43 – 46 | data range: 32 |
| • Decay One OP1 – OP4 [DR1] | CC 47 – 50 | data range: 32 |
| • Decay Two OP1 – OP4 [DR2] | CC 51 – 54 | data range: 16 |
| • Secondary Amp Level OP1 – OP4 [SA] | CC 55 – 58 | data range: 16 |
| • Release Rate OP1 – OP4 [RR] | CC 59 – 62 | data range: 16 |
| • Amp Mod. Enable OP1 – OP4 | CC70 – 73 | data range: 2 |



Operator Amplitude Envelope

Mappings are listed above with their abbreviations in square brackets.

SN76489 PSG Global Chip Controls – for the whole chip

- PAL / NTSC Tuning CC 83 data range: 2
- Noise channel control:
 - The following notes – at any octave on MIDI channel 10 – will produce the following types of noise
 - C and C#: High frequency, periodic type
 - D and D#: Medium frequency, periodic type
 - E: Low frequency, periodic type
 - F: High frequency, noise type
 - F#: Medium frequency, noise type
 - G and G#: Low frequency, noise type
 - A and A#: Frequency is determined by MIDI channel 9, periodic type
 - B: Frequency is determined by channel 9, noise type