

Anna's Music Box
computer music midi software for kids

by Larry Polansky

HMSL Turnkey Application
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Shareware

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Anna's Music Box is a shareware application. It runs on Macintoshes, and needs a MIDI interface and any MIDI synthesizer. It uses MIDI channels 1-4.

It was written for my five year old daughter, to be used in her kindergarten class. Adults also seem to have fun with it. Please copy and pass it around freely. If you like it, and use it, feel free to send CD's, videos, tapes, LP's, software, comix, stamps, or whatever else you think is cool.

Technical note (MIDI): Please remove any MIDI drivers (OMS, FreeMIDI, etc.) from your system folder. *Anna's Music Box* uses its own MIDI software. For safest results, just turn all extensions off while using it (though that shouldn't be really necessary). If you are using an OpCode Studio 4 or 5, set it to 1 MHz.

How it works: *Anna's Music Box* sends out MIDI information to whatever MIDI synthesizer is listening on MIDI channels 1-4. It consists of four "critters": musical voices which just kind of "noodle" when you turn them on (click on them and make them black).

You can change various things about how each critter noodles. You change things by either clicking in the top or bottom of a number box (raises and lowers the value by 1) or clicking on a number, and then dragging the mouse up or down (holding the mouse button down). That raises and lowers the number. Each row is a critter, each column is a musical “parameter”: something you can change. Below each column is a number labelled “all.” Changing that number changes the values for all four critters at the same time.

ANNA'S MUSIC BOX

CRITTERS	loud	sound	pitch	range	pulse	rhy	leg	sil	rep	key
critter 1	60	20	60	0	60	0	50	0	0	0
critter 2	60	20	60	0	60	0	50	0	0	0
critter 3	60	20	60	0	60	0	50	0	0	0
critter 4	60	20	60	0	60	0	50	0	0	0
all	60	20	60	0	60	0	0	0	0	0

moods

chrom	major	minor	pent	m-pent
blues	dim	whole	pelog	#-lyd

tempo

60

(revision 8/8/97; Larry Polansky)

save

1	2	3	4	5	6	7	8
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restore

1	2	3	4	5	6	7	8
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Here’s what you can change (for each critter):

- **loud:** How loud the critter is. The higher the number, the louder the sound.
- **sound:** The MIDI preset (timbre, type of sound) that the critter uses. Highest is 128.
- **pitch:** The “average pitch” of the critter. The higher the number, the higher the pitch.

- **range:** The “pitch range” around the average pitch of the critter. If it’s 0 for a critter, you’ll just hear the same note. If it’s 6, you’ll hear an octave (6 pitches on either side) of noodling. In other words, the bigger this number is, the wider the pitch range for a critter will be.
- **pulse:** The basic tempo for a critter. 60 is one note per second. The smaller the number, the faster the critter.
- **rhy:** The “rhythmic variation” around the pulse, sort of the same as the pitch range around the pitch. It goes from 0-100, and is really the “percent of variation” around the pulse. If you want very uneven rhythms for the critter, set this high. If you want a steady pulse, set it to 0.
- **leg(ato):** The “legato/staccato” of the critter. A value of 100 is as legato as the critter can be: notes are “held” for the entire duration. A value of 0 is the most staccato, notes are shut off immediately. This is one way you can silence a critter but keep it going and maintain its loudness upon reactivation. Remember that some MIDI presets may not be affected by this: percussive sounds, for example, may not change at all when you change the *legato* value.
- **sil(ence):** The probability that the critter will rest for a note. A value of 100 means that the critter will rest for *all* of its notes. A probability of 0 means that it will play all its notes. Values in-between 0->100 will create nice syncopations, and changes in texture.
- **key:**The “key” for each critter, between 0 (C) and 11 (B). There is always one “mood” for all four critters, but each one can have a different “center pitch”.
- **rep(eat):** The “interest” of the critter’s melody. Numbers between 0 (no repeating) to 100 (probably just hang around 1 note!) determine how much the critter repeats itself in terms of its “memory” (up to about 10 notes) and likelihood of playing a note it recently played. If you set it to 100, it will eventually end up just playing one note!
- **moods:** There are 8 *moods*, which are basically scales. They’re all (except for *chrom*) based more or less on C. They affect all the

critters at the same time. By selecting a *mood*, you set the pitches that the critters choose for noodling. You don't need to know anything about them to try them and hear their different sounds, but for the curious, here's a quick description of the 8 moods I've put in:

- *chrom*: all notes possible
 - *major*: C major scale
 - *minor*: C minor scale (harmonic: C-D-Eb-F-G-Ab-B)
 - *pent*: C major pentatonic (C-D-E-G-A)
 - *m-pent*: C “minor” pentatonic (C-D-Eb-G-Ab)
 - *blues*: C “blues” scale (C-D-Eb-E-F#-G-A-Bb)
 - *dim*: one mode of a C diminished scale (“whole-step/half-step”: C-D-D#-F-F#-G#-A-B)
 - *whole*: C (or E, F#, G#, A#) “whole-tone” scale
 - *pelog*: psuedo pelog pentatonic scale
 - *#lyd*: C lydian mode with a sharp 5th degree (C-D-E-F#-G#-A-B-C)
- **tempo**: This sets the overall tempo for all the critters. Lower numbers are slower tempi, higher numbers, faster. 60 is “one beat per second” (60 beats per minute). 120 is “march” tempo (120 beats per minute, or two beats per second).
 - **save/restore**: You may save and restore up to 8 versions of the screen and critter activity by clicking on the save and restore numbers. You need to remember what each of these 8 “screen presets” does, but it's a useful way of making drastic changes in the music. After you quit the program, these are all lost (they're not saved to disk).

Synchronizing the critters: Turn them all off, and then turn them all on with the “all” button. That will make them start exactly together. If they all have the same *pulse*, and *rhy* values of 0 (no rhythmic variation), they'll all move exactly together. Another nice thing you can do is set their *pulses* to some simple rhythmic ratio, say, 30, 15, 10, 5. What you'll hear then is a pattern, called a polyrhythm, which stays in sync with itself. For another interesting effect, try numbers like 20, 19, 18, 17, and listen

to the changing rhythmic pattern. These ideas will all work best when you synchronize them (start them together).

A “faux” gamelan: Set the mood to *pent* (*m-pent* is nice too, or *pelog*). Find a nice bell- or gong-like sound (something percussive, but with a clear pitch). Set the *pulses* to some 8:4:2:1 ratio, for example 80:40:20:10, or 40:20:10:5 (twice as fast). Set the “rhy” values all to 0. Set the first critter’s *pitch* to around 90 (it should be the fast one), the second to around 70, the third to around 40, the fourth to around 25 (it should be the slow one). Set all the *ranges* to around 6. Set the slow critters’ *legatos* high, and the higher (faster) critters to less legato (more staccato). Then turn them all on together, you should hear a kind of psuedo-gamelan texture. Play with it, vary it, and see what else you come up with. Try adding some possibility of silence in the high voices.

Changing the Screen Size: Just grab the lower right hand corner and drag, just like you’d normally do if there were a little sizer box there (there isn’t).

Turning it off: Hit the close box. There is no “Quit.”

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