

# Advanced Tips for KidRiffs™

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This file contains useful information not included in the Coloring Book manual.

Note: the following material is fairly technical, and is provided primarily for reference. We suggest you first try to achieve a good audio balance using the procedures described in section 4 of the README.WRI file. If those procedures do not produce good results, or you want finer control over sound balance within KidRiffs, the following material may be helpful.

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KidRiffs provides several methods for controlling the volume of different audio sources. Each method is controlled by special entries in the KIDRIFFS.INI file (located in the KIDRIFFS directory; normally C:\KIDRIFFS).

You can also adjust the level of different kinds of MIDI music, and "remap" individual drums used by KidRiffs, if necessary. For example, an "FM" synth sound card provides different instrument levels and a much smaller set of usable drum sounds than a "Wavetable" (sample-based) synth sound card. The MIDI Instrument Balance and Drum Mapper entries let you adjust KidRiffs for either type of sound card.

### 1. Using a High-Quality "Wave Table" Card

If you have a high-quality "wave table" or "sample-based" sound card, **or** a WaveBlaster or similar add-on card, you will probably hear quite noticeable volume mismatches. Most such cards use instrument volume levels similar to the Roland Sound Canvas, and these levels are very different from standard SoundBlaster levels. To correct this problem, you should "comment out" the special KIDRIFFS.INI settings for MIDI Drum and Instrument balance which adapt KidRiffs music files to SoundBlaster volume levels. This will restore the "natural" volume levels in KidRiffs music files, which were originally created to use the Sound Canvas and similar products.

To remove the special SoundBlaster volume settings in the KIDRIFFS.INI file (for best results with high-quality sound cards, or with a WaveBlaster type add-on card):

- 1.1 Use File Manager to locate the KIDRIFFS.INI file (located in the KIDRIFFS directory; normally C:\KIDRIFFS).
- 1.2 Double-click the file name in the File list box. This will bring up the NotePad editor so you can modify KIDRIFFS.INI
- 1.3 Find the section of the file with the [midi] section header. It should look something like this:

```
[midi]
----- (other lines appear here)
MIDIMixLevel=54784
AuxCDAudioMixLevel=43008
AuxLineInMixLevel=49152
WaveMixLevel=49152
----- (other lines appear here)
```

- 1.4 There are 12 lines which adapt KidRiffs for SoundBlaster type volume levels. Put a single semicolon ';' in front of each line, so that it looks exactly as shown below. Do not type the apostrophe ' characters. Do not modify any other lines.

```
[midi]
----- (other lines appear here)
;ForegroundDrumRange = 64
;ForegroundDrumOffset = 0
;ForegroundInstrumentRange = 64
;ForegroundInstrumentOffset = 0
;BackgroundDrumRange = 64
;BackgroundDrumOffset = 0
;BackgroundInstrumentRange = 64
;BackgroundInstrumentOffset = 0
;MasterVolumeDrumBoost=20
;MelodyVolumeOffset=20
;AccompanimentVolumeOffset=-20
;BassVolumeOffset=20
```

You can adjust the numbers to vary instrument balance to suit your taste. See section 3 for details.

- 1.5 Now find the section of the file with the [DrumMap] section header (See section 4 below for an example of what this section looks like). Once again, put a single semicolon ';' (without the ' apostrophes) in front of **every single line** in this section. This will restore the normal percussion instrument choices and volume levels appropriate for a high-quality sound card.

## 2. Overall Volume Control

- \* CD Audio is used for playing the "Kid Riffs Theme Song". Different versions are played when the program starts and when you enter each of the different rooms.
- \* Wave audio is used for Help, "Light Bulb" suggestions, and sound effects.
- \* MIDI Synth audio is used for the music stands, drums and playboard.

Most sound cards provide a mixer for balancing these levels. In most cases, you can use this mixer to adjust volume levels while KidRiffs is running (see section 4.8 of README.WRI for details). Kid Riffs will remember the levels you set (for sound cards which are SoundBlaster compatible) and automatically use them the next time you run KidRiffs.

To set the mixer levels directly using the KIDRIFFS.INI file:

- 2.1 Find the section of the file with the [midi] section header. It should look something like this:

```
[midi]
-----          (other lines appear here)
MIDIMixLevel=54784
AuxCDAudioMixLevel=43008
AuxLineInMixLevel=49152
WaveMixLevel=49152
```

There may be other entries as well.

- 2.2 Adjust the MixLevel value for the audio source which is too loud (or too soft). Higher numbers produce louder sound. The maximum value is 65535. The smallest value you can use is 0. (Normally, you won't need the AuxLineInMixLevel. This would only have an effect if your CD ROM audio output is plugged into the sound card's external Line In jack, rather than using the internal audio connection.)
- 2.3 In some cases, you may need to provide more information for the KidRiffs sound card mixer controls to work. Extra entries in the [midi] section of the KIDRIFFS.INI file are used for this purpose. You should not normally need to use them.
  - 2.3.1 More than one device of a certain kind.

```
[midi]
-----          (other lines appear here)
MIDIOrdinal = N
WaveOrdinal = N
AuxLineInOrdinal = N
AuxCDAudioOrdinal = N
```

If you have two or more MIDI ports, wave cards, etc., you'll probably need to specify which one to control. The 'Ordinal' value tells which device to control. For example, if you have three MIDI ports and KidRiffs is using the second one, you should put

```
MIDIOrdinal=1
```

into the `KIDRIFFS.INI` file. (The three MIDI ports are numbered 0,1,2 rather than 1,2,3).

### 2.3.2 The `MIDIMixLevel` entry doesn't seem to work.

If the '`MIDIOrdinal`' value is correct, you might need to use a different way of controlling MIDI mix level.

```
[midi]
----- (other lines appear here)
MIDIOrdinal = -1
AuxSpare1Mask = 64
AuxSpare1MixLevel=64000
```

"`MIDIOrdinal = -1`" turns off the `MIDIMixLevel` channel. The `AuxSpare1Mask` entry turns on a spare `MixLevel` channel. (Your sound card might need a different mask value. This should always be a power of two: 16, 32, 64, etc.).

The `AuxSpare1MixLevel` entry sets the volume for this channel.

### 2.3.3 The `WaveMixLevel` entry doesn't seem to work.

If the '`Ordinal`' value is correct, you might need to use a different way of controlling Wave mix level.

```
[midi]
----- (other lines appear here)
WaveOrdinal = -1
AuxSpare2Mask = 32
AuxSpare2MixLevel=40000
```

See comments above for MIDI Mix Level.

## 3. **Balance between MIDI Drums and MIDI Instruments** (Foreground and Background)

You can make drums louder (or softer) independently from instruments like piano and trumpet. You can also make "foreground" sounds (the drums and instruments **you** play) louder (or softer) independently from the "background" sounds (drums and instruments which are part of the riffs and songs that come with KidRiffs).

### 3.1 **Volume Range and Offset Values**

There are four groups of drum and instrument sounds with independent control:

- Foreground Drum
- Foreground Instrument
- Background Drum
- Background Instrument

For each of these four groups, you can control the **range** between the loudest and softest notes. You can also shift the average volume of each group to be louder or softer. There are two KIDRIFFS .INI file entries for each group of sounds. For example:

```
<GroupName>Range = 64
<GroupName>Offset = -20
```

The `Range` value "squeezes" the dynamic range for that group of sounds.

\* A value of 64 gives the widest range between loud and soft.

\* A value of 0 gives all sounds the same volume.

The `Offset` value changes the average volume of the group.

Negative values make the group softer; positive values make it louder.

64 makes the group **really loud**;

-64 makes the group (really soft).

These values are located in the [midi] section of the INI file:

```
[midi]
----- (other lines appear here)
ForegroundDrumRange = 64
ForegroundDrumOffset = 0
ForegroundInstrumentRange = 64
ForegroundInstrumentOffset = 0
BackgroundDrumRange = 64
BackgroundDrumOffset = 0
BackgroundInstrumentRange = 64
BackgroundInstrumentOffset = 0
```

The values shown set the same dynamic range and nominal loudness for all four groups. For most sound cards, you'll probably want to make the Instruments softer than the Drums. You'll probably also want to make the Foreground sounds (what you play) louder than the Background sound (what KidRiffs plays).

### 3.2 *Boosting the Drums*

Boosting the drums separately will give the best results with many sound cards. (This can be used alone, or along with the "Foreground" and "Background" settings described just above.)

```
[midi]
----- (other lines appear here)
MasterVolumeDrumBoost=20
```

This setting makes all the drums louder in relationship to non-drum instruments. You can use values between 0 (no boost) and 64 (maximum boost). "FM" synth sound cards often have very soft drums; this setting should be especially helpful with such cards.

### 3.3 *Relative Volumes for Melody, Accompaniment, Bass*

```
[midi]
MelodyVolumeOffset (current value: 20)
```

AccompanimentVolumeOffset	(current value: -20)
BassVolumeOffset	(current value: 20)

These items modify the nominal master volume setting for each kind of Riff. For example, `MelodyVolumeOffset` can make Melody riffs louder (or softer) than Accompaniment riffs, Bass riffs or Drum riffs.

These items can be used to help compensate for differences between sound cards. (See section 1 above)

### 3.4 Extended Example of `KIDRIFFS.INI`:

```
[midi]
;These control sound card mixer levels
MIDIMixLevel=54784
AuxCDAudioMixLevel=43008
AuxLineInMixLevel=49152
WaveMixLevel=49152

;These control balance between various groups of MIDI synth
sounds
;Offset values range from -64 to 64
;Range values range from 64 (no compression) to 0 (full
compression)
ForegroundDrumOffset=40
ForegroundDrumRange=16
ForegroundInstrumentOffset=30
ForegroundInstrumentRange=45
BackgroundDrumOffset=0
BackgroundDrumRange=32
BackgroundInstrumentOffset=-10
BackgroundInstrumentRange=32

;This boost all MIDI drums relative to other MIDI instruments
MasterVolumeDrumBoost=32

; (Lines removed here to shorten the example)
```

## 4. Using the KidRiffs DrumMapper

KidRiffs provides a "Drum Mapper" for adjusting the way drums are used within the program. This is mainly intended to help compensate for sound cards which do a poor job of implementing the MPC spec for percussion sounds. It can also be used to assign sounds you may prefer to the qwerty (computer keyboard) Drum Keys in the Rhythm Room and the drum sets in the Concert Castle.

### 4.1 Drum Map Settings

All drum map settings are controlled by entries in the `[DrumMap]` section of the `KIDRIFFS.INI` file.

There are three kinds of settings:

- Reassign
- DrumVolume
- DrumKey

A `Reassign` setting lets you use one drum in place of another. This affects all drums everywhere throughout KidRiffs

A `DrumVolume` setting lets you make a particular drum louder or softer compared to other drums.

A `DrumKey` setting lets you assign the 10 number keys and 26 letter keys to drums that you prefer. This is only used in the Rhythm Room.

Each `Reassign` setting must specify the old drum (which you don't want) and the new drum you want to substitute for the old drum:

```
[DrumMap]
; there must be NO SPACE between 'Reassign' and '40' !!!
Reassign40=57
```

This line would cause drum 57 to sound whenever drum 40 was triggered. Drum 40 is now history (unless some other drum is reassigned to 40). Drum 57 will still sound when drum 57 is triggered (unless there is a `Reassign57=XX` entry somewhere else).

What are all these numbers ?? The list of General MIDI Percussion instruments at the end of this file tells the drum sound which goes with each decimal number.

To change the volume of a drum:

```
[DrumMap]
DrumVolume57 = 20
```

Now drum 57 will be louder (by 20). If you used -10, drum 57 would be a little softer than before.

You can also change which drum is assigned to a computer key in the Rhythm Room:

```
[DrumMap]
DrumKeyA = 57
```

This assigns the 'A' key to trigger drum 57. The entries for `DrumKey0` through `DrumKey9` control the '0' through '9' keys (top of the keyboard). The entries for `DrumKeyA` through `DrumKeyZ` control the 'A' through 'Z' keys.

Please note: there can only be ONE `[DrumMap]` section. You can have lots of different `DrumKey`, `DrumVolume` and `Reassign` entries, but they must all be in the same `[DrumMap]` section.

## 4.2 Extended Example of KIDRIFFS.INI:

## [DrumMap]

;This section is used to modify MIDI drum sound setup  
; It has three kinds of entries: Reassign, DrumVolume and DrumKey

;The Reassign entries substitute one drum for another drum

Reassign35=45  
Reassign36=46  
Reassign37=47  
Reassign38=48  
Reassign39=49  
Reassign40=50  
Reassign41=51

;The DrumVolume entries boost or cut the volume of individual drums

; Negative values cut volume; positive values boost volume  
DrumVolume45=10  
DrumVolume46=15  
DrumVolume47=-5

;The DrumKey entries set which drum is triggered by a QWERTY key in the Rhythm Room

; You can use DrumKey0...DrumKey9 (for '0' - '9' keys)  
; and DrumKeyA...DrumKeyZ (for 'A' - 'Z' keys)

DrumKey0=45  
DrumKey1=46  
DrumKey2=47  
DrumKey3=48  
DrumKey4=49  
DrumKey5=50  
DrumKey6=52  
DrumKey7=53  
DrumKey8=54  
DrumKey9=57

DrumKeyA=51

### **4.3 LIST OF GM PERCUSSION SOUNDS**

(Some sounds are not available or have poor quality on some sound cards).

Name	Number
BASS DRUM	35
KICK DRUM	36
SIDE STICK	37
ACOUSTIC SNARE	38
HAND CLAP	39

ELECTRIC SNARE	40
LOW FLOOR TOM	41
CLOSED HIHAT	42
HIGH FLOOR TOM	43
PEDAL HIHAT	44
LOW TOM	45
OPEN HIHAT	46
LOW MID TOM	47
HI MID TOM	48
CRASH CYMBAL 1	49
HIGH TOM	50
RIDE CYMBAL 1	51
CHINESE CYMBAL	52
RIDE BELL	53
TAMBOURINE	54
SPLASH CYMBAL	55
COWBELL	56
CRASH CYMBAL 2	57
VIBRASLAP	58
RIDE CYMBAL 2	59
HI BONGO	60
LOW BONGO	61
MUTE HI CONGA	62
OPEN HI CONGA	63
LOW CONGA	64
HI TIMBALE	65
LOW TIMBALE	66
HI AGOGO	67
LOW AGOGO	68
CABASA	69
MARACAS	70
SHORT WHISTLE	71
LONG WHISTLE	72
SHORT GUIRO	73
LONG GUIRO	74
CLAVES	75
HI WOOD BLOCK	76
LOW WOOD BLOCK	77
MUTE CUICA	78
OPEN CUICA	79
MUTE TRIANGLE	80
OPEN TRIANGLE	81

#### **4.4 CONCERT CASTLE DRUM KITS**

Here is a list of the GM Percussion sounds used in the nine Concert Castle drum kits. You can change the sounds using the Drum Mapper entries described above.

#### DrumKit 1

- 1 ACOUSTIC SNARE (38)
- 2 BASS DRUM (35)
- 3 PEDAL HIHAT (44)

#### DrumKit 2

- 1 TAMBOURINE (54)
- 2 ACOUSTIC SNARE (38)
- 3 BASS DRUM (35)
- 4 PEDAL HIHAT (44)
- 5 CRASH CYMBAL 1 (49)

#### DrumKit 3

- 1 COWBELL (56)
- 2 HI WOOD BLOCK (76)
- 3 LOW CONGA (64)
- 4 OPEN HI CONGA (63)
- 5 TAMBOURINE (54)

#### DrumKit 4

- 1 LOW CONGA (64)
- 2 TAMBOURINE (54)
- 3 ACOUSTIC SNARE (38)
- 4 BASS DRUM (35)
- 5 PEDAL HIHAT (44)
- 6 CRASH CYMBAL 1 (49)
- 7 COWBELL (56)

#### DrumKit 5

- 1 LONG GUIRO (74)
- 2 BASS DRUM (35)
- 3 OPEN TRIANGLE (81)
- 4 HAND CLAP (39)
- 5 KICK DRUM (36)

#### DrumKit 6

- 1 CRASH CYMBAL 1 (49)
- 2 COWBELL (56)
- 3 TAMBOURINE (54)
- 4 ACOUSTIC SNARE (38)
- 5 BASS DRUM (35)
- 6 PEDAL HIHAT (44)
- 7 SPLASH CYMBAL (55)
- 8 LOW FLOOR TOM (41)

#### DrumKit 7

- 1 LOW CONGA (64)
- 2 HI AGOGO (67)

3	LOW AGOGO	(68)
4	HI TIMBALE	(65)
5	LOW TIMBALE	(66)
6	CABASA	(69)
7	MARACAS	(70)
8	HI BONGO	(60)
9	LOW BONGO	(61)
10	LONG WHISTLE	(72)
11	OPEN CUICA	(79)

#### DrumKit 8

1	CRASH CYMBAL 1	(49)
2	BASS DRUM	(35)
3	LOW FLOOR TOM	(41)
4	OPEN TRIANGLE	(81)
5	SPLASH CYMBAL	(55)
6	KICK DRUM	(36)

#### DrumKit 9

1	SHORT GUIRO	(73)
2	HI AGOGO	(67)
3	LOW AGOGO	(68)
4	HI TIMBALE	(65)
5	LOW TIMBALE	(66)
6	OPEN CUICA	(79)
7	HAND CLAP	(39)
8	LOW WOOD BLOCK	(77)
9	LONG GUIRO	(74)
10	MARACAS	(70)

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