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Subject: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Sun, 02 Jul 2006 20:24:06 GMT  
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Is there a way to measure the dynamic range of material in wavelab, harbal,  
cool edit or something?

Thanks

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [gene lennon](#) on Sun, 02 Jul 2006 20:46:05 GMT  
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"John" <no@no.com> wrote:

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>Is there a way to measure the dynamic range of material in wavelab, harbal,  
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>Thanks

Wavelab includes tools called Global Analysis that report Peaks, RMS Power  
(including Max, Min and Average), as well as pitch, errors and DC offset.

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Sun, 02 Jul 2006 21:55:26 GMT  
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What would accurately describe dynamic range in those?

"gene lennon" <glennon@NOSPmyrealbox.com> wrote:

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>"John" <no@no.com> wrote:  
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Subject: Re: Measuring dynamic range in wavelab?

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Posted by [Dedric Terry](#) on Sun, 02 Jul 2006 23:05:03 GMT

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Used dynamic range for a selection, or possible dynamic range in general?

Obviously the latter is determined by your bit depth - 96dB for 16 bit, 144dB for 24 bit. You can always select a range in either Wavelab's analysis or Cool Edit Pro's Statistical Analysis (iirc) - the difference between the min and max values in dB would be the dynamic range covered for that selection.

Regards,  
Dedric

On 7/2/06 3:55 PM, in article 44a840ce\$1@linux, "John" <no@no.com> wrote:

>  
> What would accurately describe dynamic range in those?  
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Subject: Re: Measuring dynamic range in wavelab?

Posted by [gene lennon](#) on Sun, 02 Jul 2006 23:18:30 GMT

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"John" <no@no.com> wrote:

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>What would accurately describe dynamic range in those?  
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The problem is that people use the term to mean different things. The traditional definition, is the difference between the loudest part of the recording and the softest part.

It is confusing because some people define it as the loudest part compared to the point that sound is at equal level to the noise level (noise floor). Additionally, some people consider the levels to be the literal peaks and some insist it is based on a power curve or RMS average.

Dynamic range is normally expressed in decibels (dB).

The typical dynamic range for a cassette recording is around 60dB, analog mastering tape without noise reduction about 76dB, CDs can reach a dynamic range of just under 100dB. Compare this to 120dB or more for live orchestral performances.

Although the term is thrown around loosely, I prefer the literal definition.

The difference between the loudest part of the recording and the softest part. Expressed in db and representing literal peek levels. This is a simple calculation using Wavelab.

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Subject: Re: Measuring dynamic range in wavelab?

Posted by [John \[1\]](#) on Mon, 03 Jul 2006 00:54:03 GMT

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I have a song and I want to see how much "range" it covers. Basically, how compressed or dynamic it is. What do you recommend?

Thanks in advance.

Dedric Terry <dterry@keyofd.net> wrote:

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>Obviously the latter is determined by your bit depth - 96dB for 16 bit,

>144dB for 24 bit. You can always select a range in either Wavelab's

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Mon, 03 Jul 2006 01:00:42 GMT  
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So how do I measure the range that a song has. For example some pop songs I'm watching don't appear to move more than 8db on the Paris meters. Constant volume with only 6 to 8db changing. How to quantify that?

"gene lennon" <glennon@NOSPmyrealbox.com> wrote:

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [Dedric Terry](#) on Mon, 03 Jul 2006 02:06:18 GMT  
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I would use the statistics tools in either Wavelab or CEP to determine the lowest level and the highest peak in dB, and subtract to get the difference (easier than watching peak meters to see how far they drop - you have a peak hold that will work for the highest peak level). With pop, rock, R&B, etc, it really might only be 6 or 8dB.

That is what I would consider the dynamic range of a song - just the simple difference between the highest peak and the lowest (including silent sections). With a silent break in the song somewhere, the song's dynamic range could actually be 80 or 90+dB.

Regards,  
Dedric

On 7/2/06 6:54 PM, in article 44a86aab\$1@linux, "John" <no@no.com> wrote:

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Subject: Re: Measuring dynamic range in wavelab?

Posted by [rick](#) on Mon, 03 Jul 2006 09:48:16 GMT

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paris meters are not providing you an analysis of the audio but just the peak value at any given moment in the song. they are not fast enough to show all aspects of the sound you are monitoring.

On 3 Jul 2006 11:00:42 +1000, "John" <no@no.com> wrote:

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John](#) on Mon, 03 Jul 2006 12:04:46 GMT  
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Interesting. So what tools & functions are the best way to characterize a songs dynamic range?

Take for example a song that has a very steady rock volume and I'm hearing an isolated drum part of this driving beat and I'm trying to determine how dynamic it is. Ideas? Using wavelab, harbal, cooledit, or a plug in?

rick <parnell68@hotmail.com> wrote:

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>On 3 Jul 2006 11:00:42 +1000, "John" <no@no.com> wrote:

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Subject: Re: Measuring dynamic range in wavelab?

Posted by [John](#) on Mon, 03 Jul 2006 12:14:19 GMT

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How can I get the dynamic range for "program material". In other words, I'm looking for the difference between the average loudest part compared with the average quietest part over a 10 second period for example (think of a verse of a rock and roll song). It's got a pretty consistent volume but it does go up and down.

I'm basically trying to come up with a dynamic range that mirrors my favorite songs in mastering and learning how much to compress on each instrument.

Thanks

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [gene lennon](#) on Mon, 03 Jul 2006 14:48:49 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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"John" <no@huh.com> wrote:

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>but it does go up and down.  
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>I'm basically trying to come up with a dynamic range that mirrors my favorite  
>songs in mastering and learning how much to compress on each instrument.  
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>Thanks

For getting your mixes to sound competitive to other tracks in terms of loudness, and compression, you should not be looking at dynamic range as much as RMS Power (Also referred to as Average -power). The best method is to use a hardware power meter like a Dorrough Electronics unit.

[http://www.dorrough.com/Products/Digital\\_Audio\\_Meters/digital\\_audio\\_meters.html](http://www.dorrough.com/Products/Digital_Audio_Meters/digital_audio_meters.html)

WaveLab Sound Forge and many other editors will give you this number, so you can run your favorite tracks through and compare to your tracks.. Just not in real-time like a meter.

A good video tutorial is on the Har-Bal site:

[http://www.har-bal.com/mastering\\_process.php](http://www.har-bal.com/mastering_process.php)  
Gene

---

Subject: Re: Measuring dynamic range in wavelab?  
Posted by [Neil](#) on Mon, 03 Jul 2006 15:45:41 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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"gene lennon" <glennon@NOSPmyrealbox.com> wrote:  
>WaveLab Sound Forge and many other editors will give you this number, so  
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>not in real-time like a meter.

Voxengo Span is a free VST real-time spectrum analyzer that also has RMS & Peak RMS readouts.

And it's free.

Did I mention it's free?

<http://www.voxengo.com/product/SPAN/>

:)

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [gene Lennon\[3\]](#) on Mon, 03 Jul 2006 17:53:33 GMT  
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"Neil" <OIUOIU@OIU.com> wrote:

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>Did I mention it's free?  
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><http://www.voxengo.com/product/SPAN/>  
>  
>:)

Good call on the Voxengo plug.

Interestingly, my Dorrough meter, Voxengo Span and Wavelab all give dramatically different readings, but all three are helpful, as is InspectorXL.

Gene

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [rick](#) on Mon, 03 Jul 2006 18:34:48 GMT  
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sooo...how much is it?????

On 4 Jul 2006 01:45:41 +1000, "Neil" <OIUOIU@OIU.com> wrote:

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [rick](#) on Mon, 03 Jul 2006 19:50:10 GMT  
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john,

as a side note, if it's more of the occasional level variation you are concerned with...why not just do level adjustments as if you were flying the faders as opposed to using compression on every track? myself, am more inclined to do the "gain change" on a passage then to throw a compressor on to level things out...just a thought.

On 3 Jul 2006 22:04:46 +1000, "John" <[no@wtf.com](mailto:no@wtf.com)> wrote:

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>rick <[parnell68@hotmail.com](mailto:parnell68@hotmail.com)> wrote:

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [Deej \[1\]](#) on Mon, 03 Jul 2006 22:05:12 GMT  
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Sooooo.....if we all start acting like a bunch of compressors, isn't that going to get us in trouble with the compressors union?

"rick" <parnell68@hotmail.com> wrote in message  
news:a1tia2l8aglgbcella04ejlr1nhsv2fj71@4ax.com...

> john,  
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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Mon, 03 Jul 2006 22:35:52 GMT  
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I keep thinking I need hard compression to get the drums in the pocket. They are so dynamic currently. I'm just trying to tame drum tracks. Ideas?

rick <parnell68@hotmail.com> wrote:

>john,

>

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>>>>>Although the term is thrown around loosely, I prefer the literal definition.  
>>>>>The difference between the loudest part of the recording and the softest  
>>>>>part. Expressed in db and representing literal peek levels. This is  
a  
>>simple  
>>>>>calculation using Wavelab.  
>>>>>  
>>>>>  
>>>>>  
>>>>>  
>>>>>  
>>>  
>

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Mon, 03 Jul 2006 22:37:58 GMT  
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What does RMS tell you about dynamics as opposed to just overall volume?

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Mon, 03 Jul 2006 22:59:40 GMT  
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What does RMS tell you about dynamics as opposed to just overall volume?

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [gene lennon](#) on Tue, 04 Jul 2006 04:04:09 GMT  
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"John" <no@no.com> wrote:

>  
>What does RMS tell you about dynamics as opposed to just overall volume?

Peek levels have nothing to do with how loud a recording is perceived. A record can have a very low overall level and have a few peeks that are never even really heard. Technically this recording could have a very high dynamic



range and yet have all the audio recorded in a very narrow range of levels with just a few added peeks. This is why simply looking for a specific dynamic

RMS is the closest measurement we have to perceived level. On radio its

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Tue, 04 Jul 2006 11:08:24 GMT  
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The waves paz looks interesting. I can put an EQ in front of it and isolate frequencies and it appears to show the dynamic range of my kick. Lots to learn.

"gene lennon" <glennon@NOSPmyrealbox.com> wrote:

>  
>"John" <no@no.com> wrote:  
>>  
>>What does RMS tell you about dynamics as opposed to just overall volume?  
>  
>  
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>RMS is the closest measurement we have to perceived level. On radio its  
  
>

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [rick](#) on Tue, 04 Jul 2006 11:39:07 GMT  
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so are you talking dynamics relative to specific frequencies of a sound? selective equing can certainly alters ones perception of "level" without actually making it any louder. this is the art of making space for everything in the mix...knowing what to take out to let the other in.

On 4 Jul 2006 21:08:24 +1000, "John" <no@no.com> wrote:

>  
>The waves paz looks interesting. I can put an EQ in front of it and isolate  
>frequencies and it appears to show the dynamic range of my kick. Lots to  
>learn.  
>  
>  
>"gene lennon" <glennon@NOSPmyrealbox.com> wrote:  
>>  
>>"John" <no@no.com> wrote:  
>>>  
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>>  
>>RMS is the closest measurement we have to perceived level. On radio its  
  
>>

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [Neil](#) on Tue, 04 Jul 2006 15:31:59 GMT  
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"gene lennon" <glennon@NOSPmyrealbox.com> wrote:  
>  
>"John" <no@no.com> wrote:  
>>  
>>What does RMS tell you about dynamics as opposed to just overall volume?  
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>  
>RMS is the closest measurement we have to perceived level. On radio its

But also, if you're using Span, or something else that has

both RMS & PRMS readouts, you can get a gauge of the overall dynamics by comparing the two readings. If you've got a PRMS of -7, and an RMS of -20, there are more dynamics than if you're PRMS is again -7, but your RMS is -12.

Obviously, these readouts are going to vary from one part of a song to another (unless Vlado Meller mastered it :D ), but if you're trying to compare your mix to a commercially-released track & get similar dynamics out of yours, these two readings can be helpful (as can your ears).

Neil

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Subject: Re: Measuring dynamic range in wavelab?  
Posted by [John \[1\]](#) on Tue, 04 Jul 2006 15:47:42 GMT  
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Yeah I think so. The Waves Paz seems to show me a nice difference in the dynamics. I think that's what I need. Thanks guys.

rick <parnell68@hotmail.com> wrote:

>so are you talking dynamics relative to specific frequencies of a  
>sound? selective equing can certainly alters ones perception of  
>"level" without actually making it any louder. this is the art of  
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>let the other in.

>

>On 4 Jul 2006 21:08:24 +1000, "John" <no@no.com> wrote:

>

>>

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>>

>>

>>"gene lennon" <glennon@NOSPmyrealbox.com> wrote:

>>>

>>>"John" <no@no.com> wrote:

>>>>

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>>>RMS is the closest measurement we have to perceived level. On radio its

>>>

>

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