Using the Alignment Helper

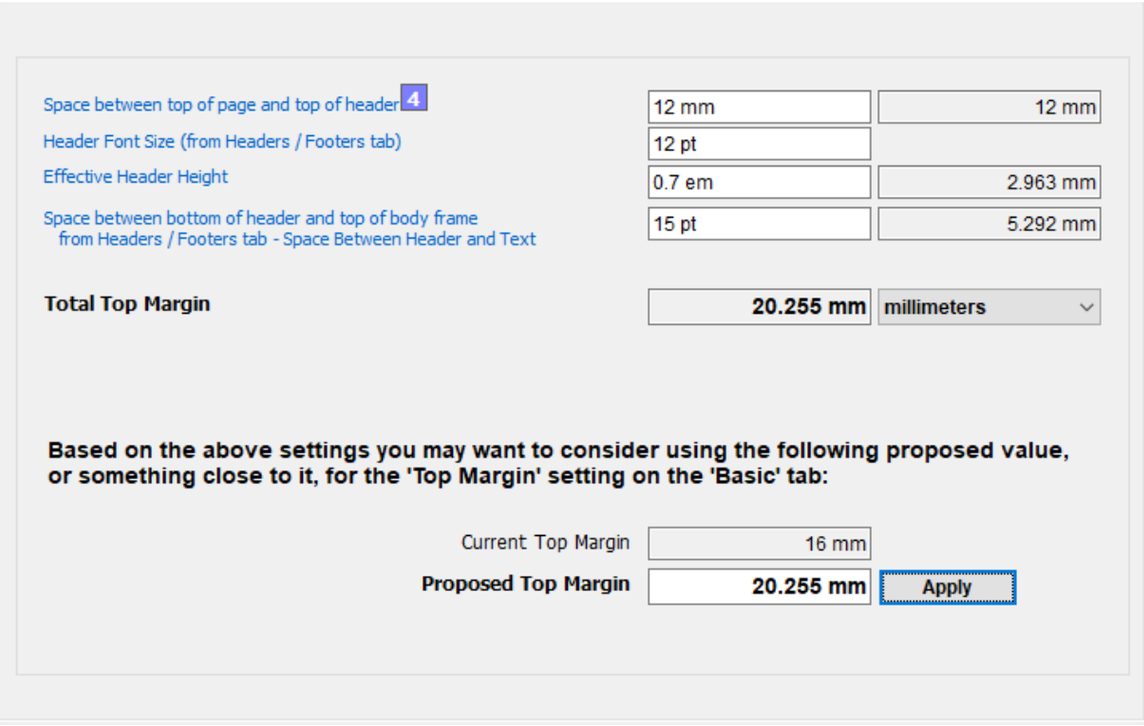
These settings used to be calculated in a spreadsheet, but having this helper built into PA6 makes so things much easier.

These settings can look intimidating at first, because it's showing you everything that needed to appear in the spreadsheet. However, once you learn what to focus on (and what to ignore), this tool lets you produce better results.

The alignment helper has three tabs: Calculate Top Margin, Alignment Settings Helper, and Calculate NoteFrame's Bottom Inset Spacing.

Calculate Top Margin

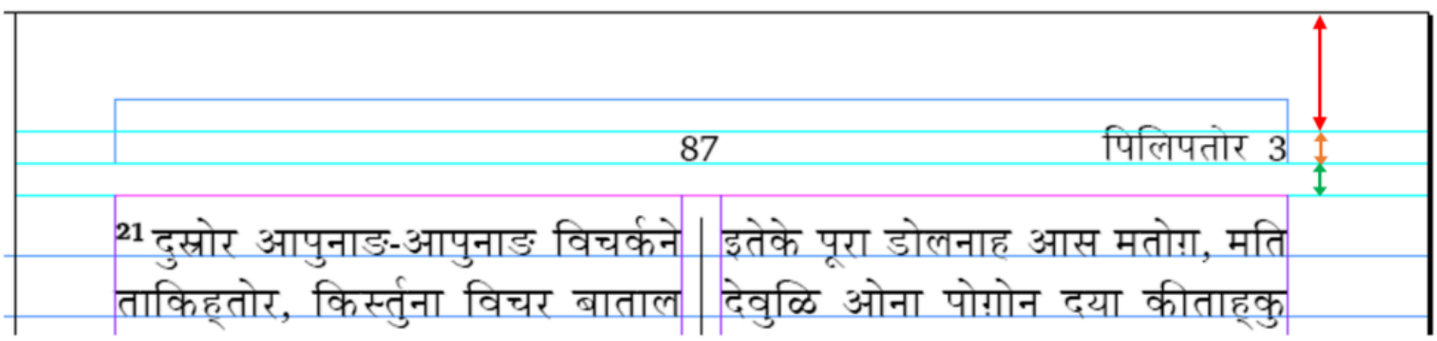
This tab currently looks like this:



Note that the 2nd and 4th fields (Header Font Size and Space between Header and Text) are settings from the Headers / Footers tab. Any changes to them made here are immediately copied back to the corresponding tab. By changing them here you can see how they contribute to the total top margin calculation. You can also select which units you'd like to see the calculation in.

What it's all about:

The publisher may require a certain amount of gap between the top edge of the page and the top of the text. (The distance shown below with a red arrow.) They may refer to this gap as the "top margin", but PA uses the term "top margin" to refer to the distance from the top edge of the page to the top of the "pink box" that the text fits within. PA's Top Margin must include space for the measurements of all three arrows in the image below:



Red arrow:

The space required between the top of the page and the top of the header. Enter this distance in the first field.
E.g. 10 mm

Orange Arrow:

Next you'll need to enter the distance from the top of the header text to its baseline. (This is called the "Effective Header Height".) For a writing system that has occasional top diacritics (as in the image above), I'd define the top as about halfway up those diacritics, as not all book names will have them. Ideally, you should measure this distance in your document to be

accurate. But as a general rule of thumb, for most writing systems and fonts, this is typically about 70% of the header font size. Another way of saying “70% of the header font size” is **0.7 em**.

Note: Prior to PA 6.0.100.17, the default value was based on the metrics of the font, but this was problematic. The current default is 0.7 em. If you’re using one of the commonly-used fonts listed below, you can ensure an accurate distance by using the corresponding em value:

Font	Effective Header Height
Arial Unicode MS (at least for Devanagari)	**0.72 em**
Annapurna SIL	**0.75 em**
Rachana	**0.68 em**
TAML ThiruValluvar	**0.68 em**
Charis SIL	**0.68 em**
A_Reethi	**0.75 em**
Noto Serif Bengali	**0.77 em**
SolaimanLipi06	**0.68 em**
Hajong Assamese	**0.75 em**
Minion Pro	**0.65 em**
Gentium Plus	**0.62 em**

Otherwise, accept the default of 0.7 em, and measure the result in InDesign. Then you can adjust the top margin accordingly, if necessary.

Green Arrow:
This distance is the “Space between Heading and Text” setting from the Headers/Footers tab. PA automatically enters this for you.

By adding these three distances together, the tool will propose a Top Margin setting. Click Apply to set it.

Feature Requests:

Proposal #2: Revised Top Margin

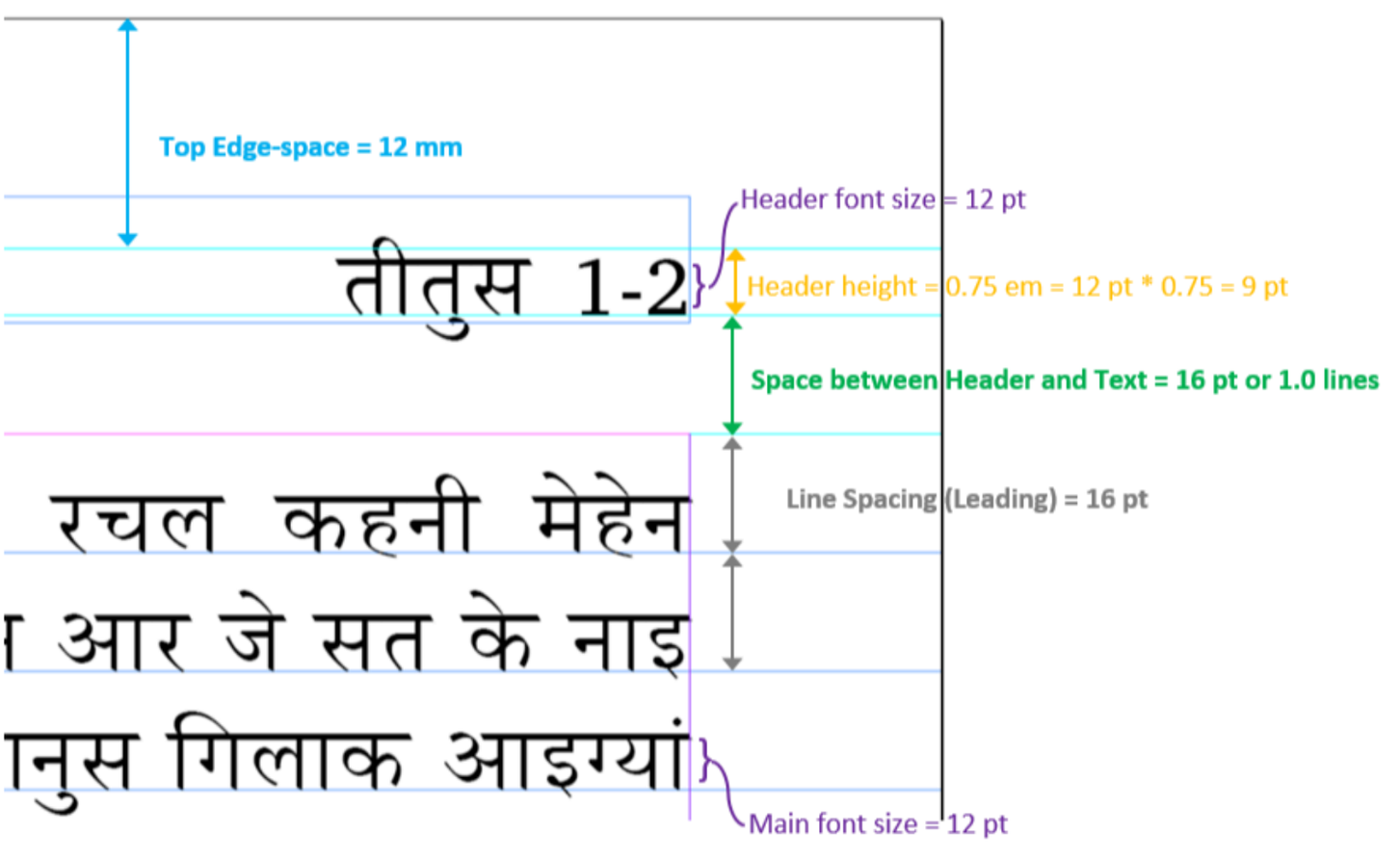
Based on feedback and discussions, I’d like to propose a revamp of the approach to handling the Top Margin, to make it more intuitive. The problem is that the setting is not the dimension that a publisher uses to specify their requirements, hence the need for a “Calculate Top Margin” tool in the first place. For that matter, the current Top Margin setting is not directly measurable on a printed page:

CURRENT SETTINGS

There is a further complication in that the term “top margin” is often used by different people to mean different things:

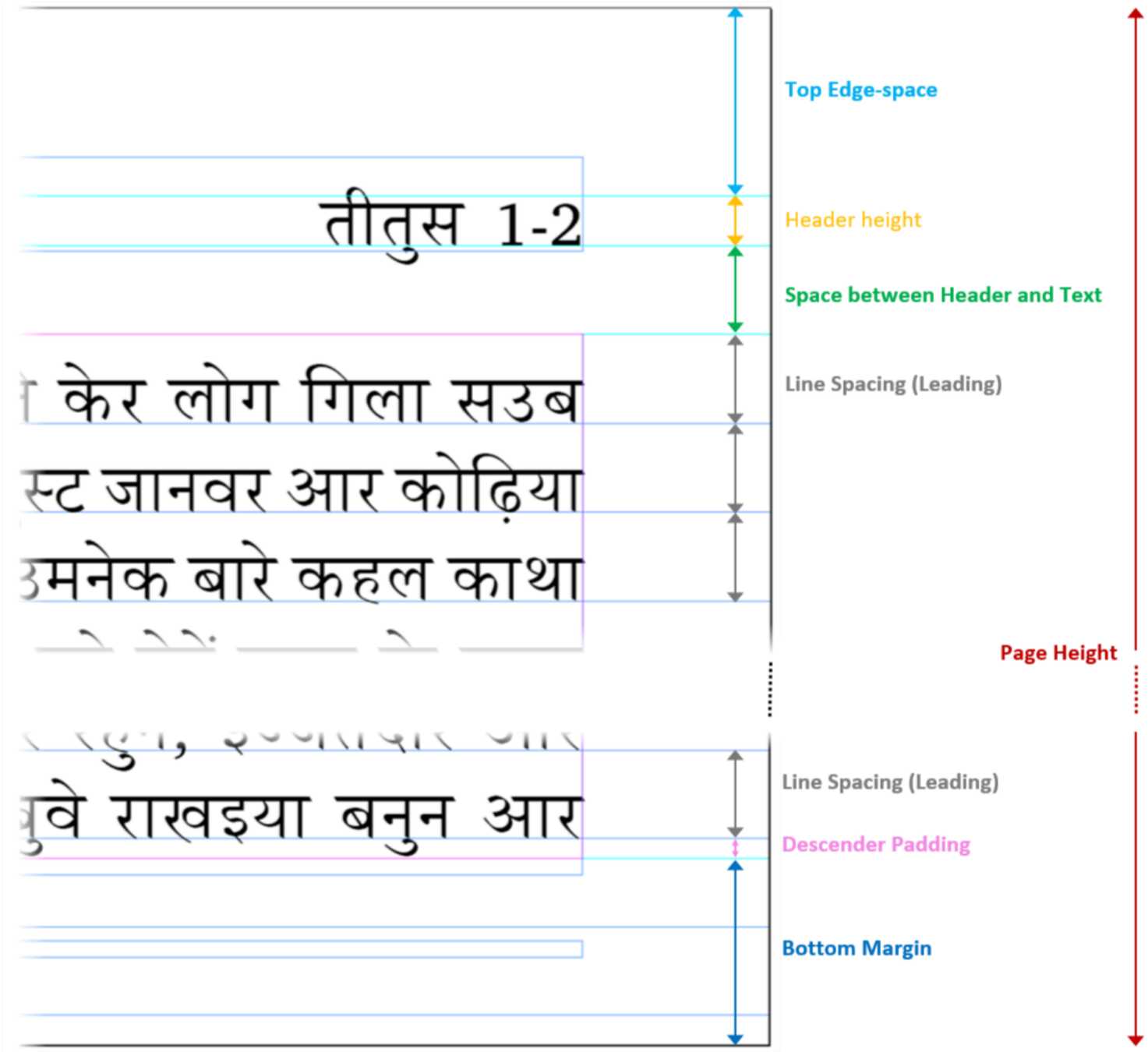
- Often in the industry, this term is used in the same way that PA currently does, referring to the distance from the top of the page to the top of the text frame. A less-ambiguous term for this might be “Text frame top offset”.
- Typical stylesheets from Bible publishers use the term “top margin” to refer to the blank space between the edge of the page and the ink, just like the bottom, inside, and outside margins. A less-ambiguous term for this might be “Top edge-space”.

This proposal is for PA settings to be in terms like these:



- The “Top Margin” setting would be replaced with a setting of “Top Edge-space”, and the pop-up description would say something like “Specify the amount of blank space between the top of the page and the top of the header text. (Default units: mm)”
- The **Calculate Top Margin** tool would be removed. Its “Effective Header Height” setting would be moved to the Headers/Footers tab, and renamed to **Header Height**, right next to the **Font Size** setting. The pop-up description would say something like, “Enter the amount of space to allocate the header text, from the top of the characters down to the baseline. Note that the amount of space that your header text occupies may vary with the font and with the particular characters used in the header. For absolute accuracy, you can measure this in InDesign and provide the measurement here. Otherwise, it should be very close if you leave this setting with the default measurement of 0.7 em. (Default units: em)”
- Allow the Space between Header and Text to be optionally specified in lines. Default should be 1.0 lines. The pop-up description would be something like, “Enter the distance from the baseline of the running header to the top line of the body frame (i.e. the start of the document grid). Enter 1.0 lines to use the document’s Line Spacing setting. (Default units: lines)”

Ideally, the help documentation and/or dialog could display a graphic to illustrate the meaning of each of these vertical-distance settings, something like this:



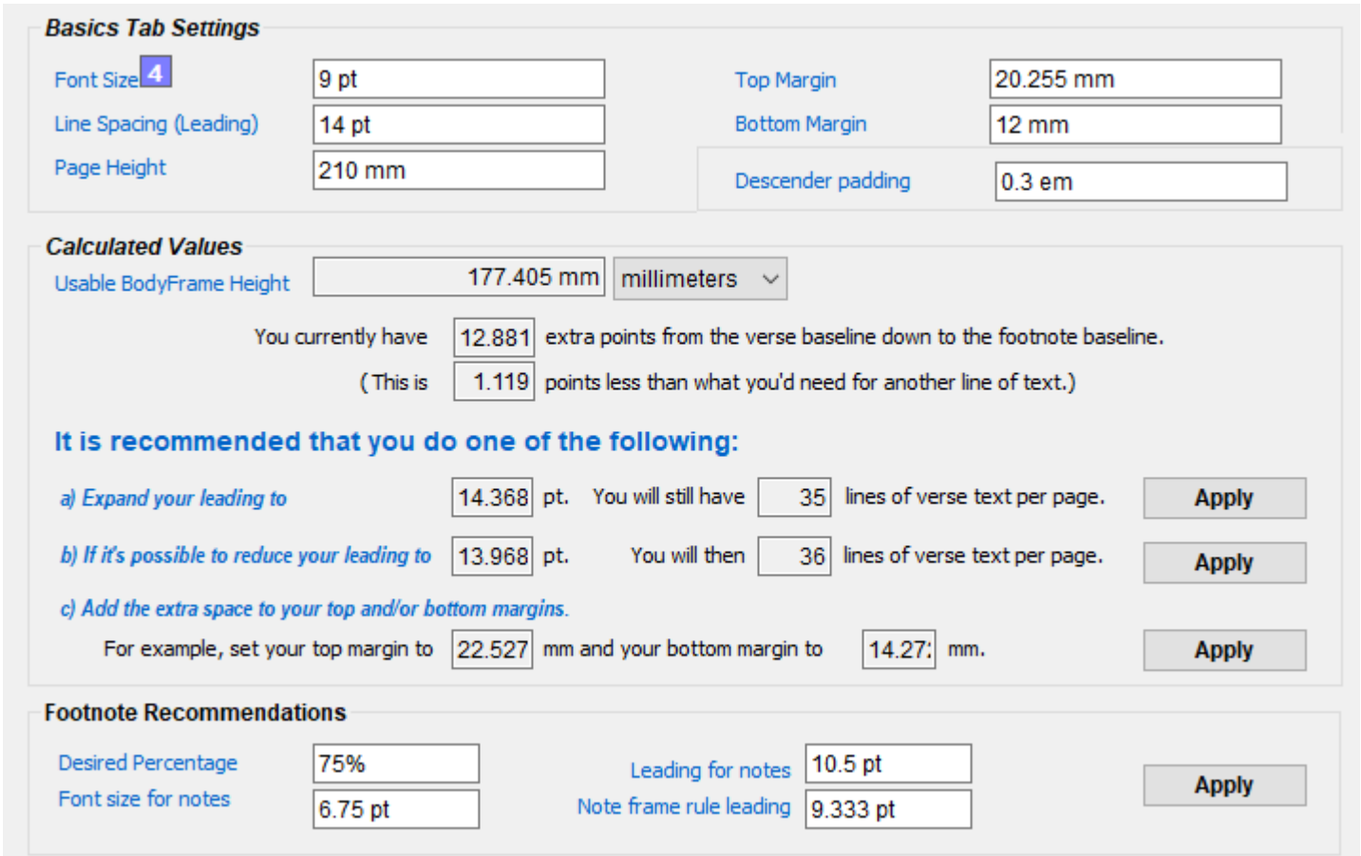
Note that a stylesheet with an *empty* header will be distinguished from a stylesheet with *no* header because the latter will have zero values for both Header Height and for Space Between Header and Text.

Internal implementation note: PA should convert an old stylesheet/job to a new stylesheet/job and obtain identical results by using the following steps:

- Insert a new setting of Header Height with the default value (e.g. 0.7 em) or the equivalent in absolute points.
- If Space Between Header and Text is currently zero or blank, that has been a code for “1.0 lines”. Replace with 1.0 lines. In the new format, zero now means zero, and may be used for publications without headers.
- Add the point values of Header Height and Space Between Header and Text, then subtract this total from the old Top Margin setting in order to get the new Top Edge-space setting.

Alignment Settings Helper (Fine-tuning your Leading)

This tab currently looks like this:



As with the Top Margin tab, most of the inputs come directly from other tabs. The Font Size, Leading, Page Height, Top Margin, and Bottom Margin come from the Basics tab. If they are edited here, their values are copied back to the Basics tab.

Once you've finalized your page height and top and bottom margin settings, these define the height of the body frame, that is, the "pink box". Your goal is to make the best use of the vertical space available in the pink box.

It's recommended that you reserve some space at the bottom of the pink box for "descender padding". Print on demand requires that no ink appears below the bottom of the pink box, so setting the Descender Padding to 0.3 em will generally reserve an appropriate amount of space.

When the remaining height in the pink box is divided by your chosen line spacing (See *Best Practices for Determining Line Spacing*), there will almost always be a fraction of a line left over. If it's almost a whole line, you might consider squeezing your leading just a tiny bit so that you'll get an extra line of text on the page. If that would be too tight of spacing, rather than throwing this remainder away at the top or bottom margin, it is better to divide it across all the lines to improve readability. Either way, you'll get the baseline of the bottom line of text to be perfectly positioned at "descender padding" height above the bottom pink line, making the best possible use of the available space.

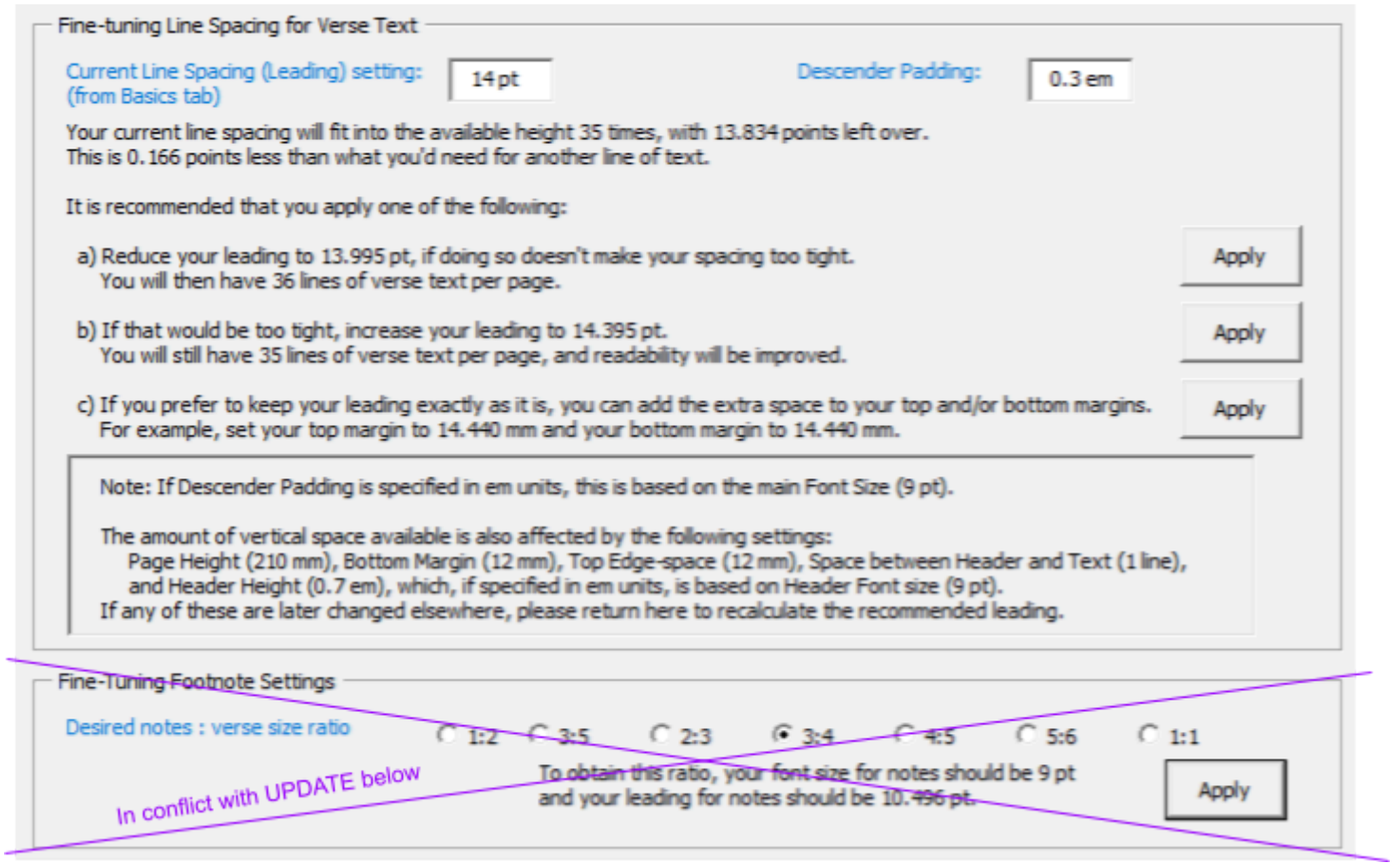
Look at the recommendations, particularly (a) and (b). If the reduced leading of (b) is not too far from your current leading, try it and see whether it's acceptable. If that's too tight, choose option (a) to distribute the extra space across all lines. Click Apply on your chosen option to update your Line Spacing setting.

Finally, look at the "Footnote Recommendations" section. What percentage of the verse text size should the footnote text be? Enter this as the Desired Percentage. It's best if this is a figure that corresponds to a common ratio of whole numbers, such 75%, 80%, or 66.6666%. For example, at 75%, four footnote lines occupy exactly three page lines. Since you've just changed your leading, click Apply here to update your footnote settings accordingly.

Note: The calculation for the **note frame rule leading** box shows you the value that PA6 will use if you leave the Note Frame Rule Leading setting empty on the Footnotes page. (This figure is ⅔ of the main leading. The note frame rule's spaceAfter property uses the other ⅓ of the main leading. This causes the horizontal line to be ⅔ of the way down in the one line of minimum vertical distance that this gap occupies.) If you want the Note Frame Rule to occupy *at least* one full line of the main leading, then this value is fine. If you are (hopefully) not using vertical justification, this value will result in a gap between text and notes that is greater than or equal to one line, and less than two, depending on the number of lines of footnote text and the footnote leading. To have the note frame rule create a minimum gap of a certain number of lines, such as 0.8 lines, then multiply that factor by the note frame rule leading figure shown here, replacing the displayed number with that product. For example, if the main leading is 12 pt, this number will initially be 8 pt. (That is, 12 pt × ⅔.) If you want the minimum gap to be 0.8 lines, replace 8 pt with 6.4 pt (8 pt × 0.8) and click **Apply**. If you later adjust the leading, then come and recalculate this setting, too. (The manual alternative would be to multiply mainLeading × ⅔ × minGapLines and enter this figure in the Note Frame Rule Leading setting on the Footnotes page.)

Feature Requests:

While having all the settings editable at one's fingertips can save a couple clicks for a highly advanced user, it has proven highly daunting, even overwhelming, for virtually every typesetter I've trained. This page would be more helpful if simplified something like this:

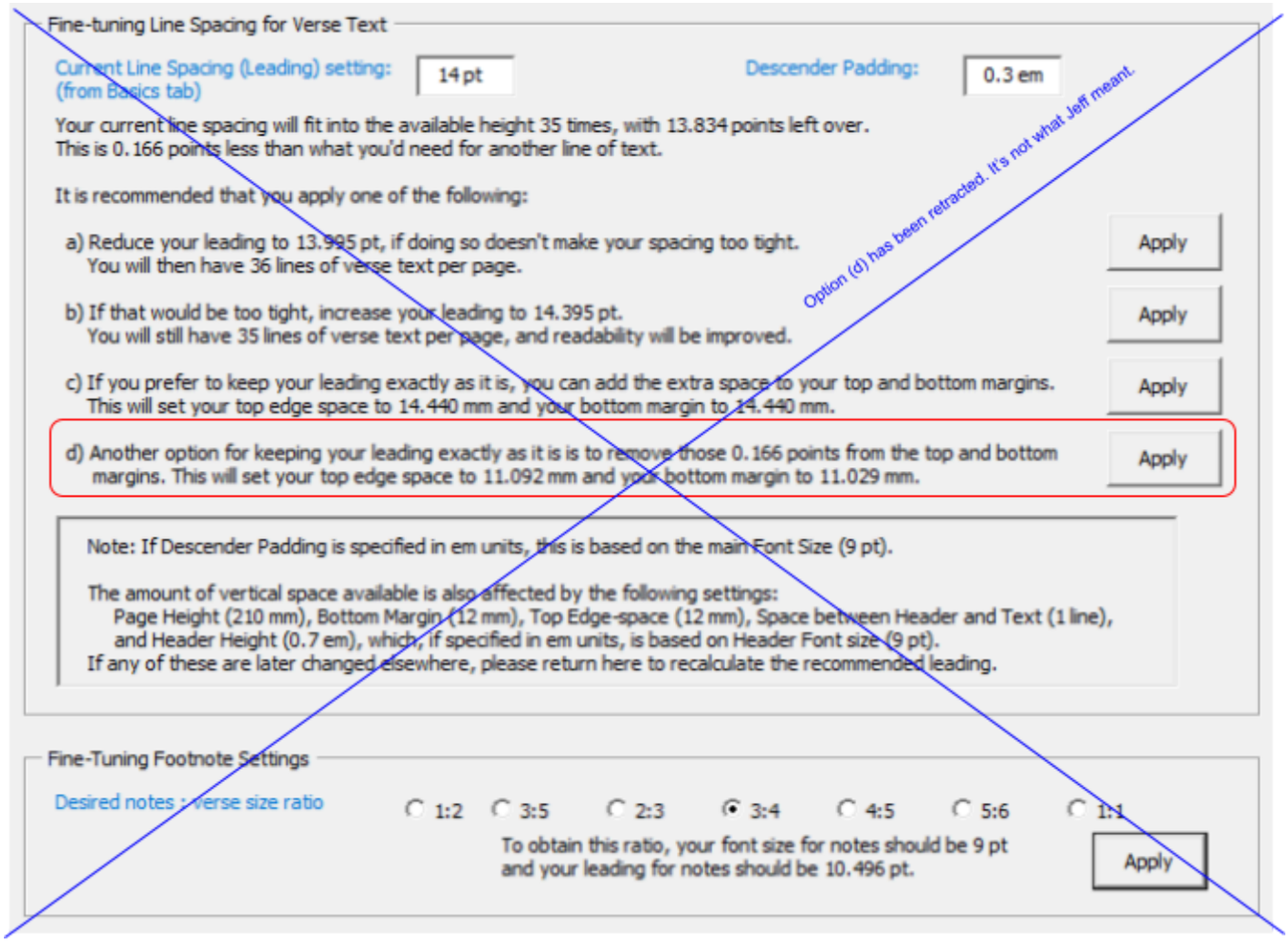


I've considered whether it might even be worth dropping the duplicated Leading field from this page, for the sake of simplicity. However, in actually using this tool, that's the one setting that actually makes sense to experiment with, and I do so all the time, so I'm torn between convenience for power users and usability for normal users. I think I'd keep it for the sake of power users.

It's worth showing the user which other settings in PA affect this calculation, so that they know to come back and update this if they change those settings.

I think it makes more sense to switch the order of options (a) and (b), as shown above. I personally think that option (c) was a pointless waste of space, so I initially proposed dropping it. However, some users have always had more rounded leading figures, and leaving it there lets them retain that familiar feel, so I've added it back in.

~~Actually, I see that Jeff also likes an option for *removing* a smidgen from the margins, assuming it's a small enough piece that the publisher's requirements are still reasonably satisfied. This would call for a new option, (d), like this:~~



~~Of course, if you're enough of a power user to handle that approach without abusing it, you'll know how to achieve that without being given a special option for it. My concern is for trainees who must process one more option like (d), which actually cuts into the publisher's specified requirements. Personally, I'd rather not clutter the interface with this option. Our trainee base is increasingly non-Western, non-mother-tongue English speakers. Less is more here.~~

I'd suggest constraining the footnote scale to a ratio of integers rather than an arbitrary percentage. The point of fine-tuning is to get a certain number of footnote lines to equal a certain number of verse lines so you don't end up with awkwardly large gaps that just missed fitting a line in by a point or two, as can happen otherwise.

I'd also recommend dropping the note frame rule leading setting from this page. While its value does depend on the main page leading, it doesn't have to be specified in absolute terms. I believe it would be much more natural for the user setting to be configured in terms of "lines". Normally, we speak of these in terms of "lines" of verse text. E.g. "There should be *at least one blank line* between verse text and the top of the footnotes" or "as close as possible to one blank line". I'd propose that instead of having the user enter a note frame leading, on the Footnotes page, they should enter a setting for "Minimum gap between verse text and notes: [__] lines" (default: 1.0). We say "minimum" because when we avoid using vertical justification, the size of the gap varies with the number of footer lines consumed. Personally, I would generally encourage users to make the minimum gap 0.75 lines, so that the total gap varies between 0.75 and 1.74999 lines (rather than between 1 and 1.9999 lines). And if footnotes are at 75% scale, the total gap would actually vary between .75 and 1.5 lines. At document-creation time, this Minimum Gap setting can then be multiplied by the main leading setting to determine the minimum gap in absolute terms, and then that number can be divided between the noteFrameRule's Leading and spaceAfter properties in the same ⅔ and ⅓ portions. The user should not have to do manual calculations (as described in my user guide above) in order to get/keep the note frame rule leading settings scaled to a particular percentage.

> **UPDATE By Dan, Feb 22, 2019:**
>
> Actually, as the discussion has raised the question whether adjusting the leading is indeed necessarily the recommended solution for making the best use of vertical space, it's clear that we need to think through the purpose of the upper portion of this tab more thoroughly. However, I think it might simplify that discussion if we first deal with the "Footnote Recommendations" / "Fine-Tuning Footnote Settings" section. The reason that it's on this tab in the first place is that this tab is oriented to fine-tuning your leading, so if you tweak the leading, you'll need to tweak the footnote leading, too.
>
> This discussion made me stop and consider how else we might automatically keep these in sync. What had never occurred to me before, but seems blindingly obvious now, is that this part of the UI could be completely dispensed with *if only footnote font size and leading could be expressed as percentages!* Indeed, when the publisher actually specifies anything about these settings, it is in these terms rather than absolute point sizes. E.g. "The footnote font size and leading should be three quarters of the scale of the verse font size and leading."
>
> I'd propose:

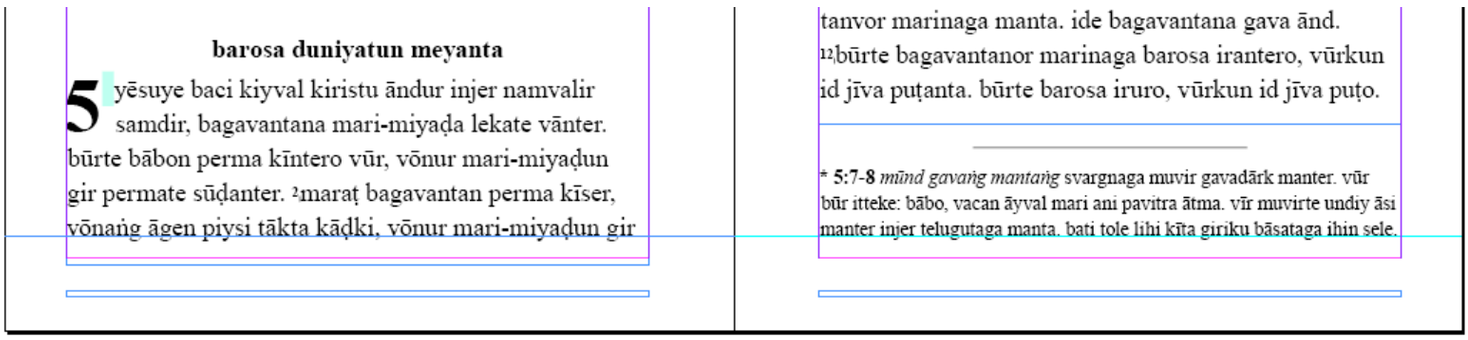
- that the “Footnote Recommendations” / “Fine-Tuning Footnote Settings” section is completely removed from the Alignment Helper.
- that the settings on the Footnotes tab for “Font size for Notes” and “Line Spacing (Leading) for Notes” permit the user to specify a measurement in “%” units. E.g. 75%.
- that the default setting for note size and leading in new jobs becomes 75%.
- that the user may alternatively specify a fraction for these two settings. E.g. “2/3" rather than “66.667%”. As described above, it’s important that the scale be a true ratio of integers.

If we do this, and we also eliminate the Alignment Helper’s 3rd tab (Bottom Inset Spacing, below), we’ll be left with just the issue of managing—in isolation from other factors—the page’s vertical space.

Why don’t we first get consensus on eliminating the Footnote and BIS portions from the Alignment Helper, and then return to address the management of the page’s vertical space?

Calculate NoteFrame’s Bottom Inset Spacing

With some versions of InDesign, it used to be necessary to use this tab to calculate the “Noteframe’s Bottom Inset Spacing (BIS)”, an internal setting that enabled the baseline of the last note to align with the baseline of the verse text, like this:

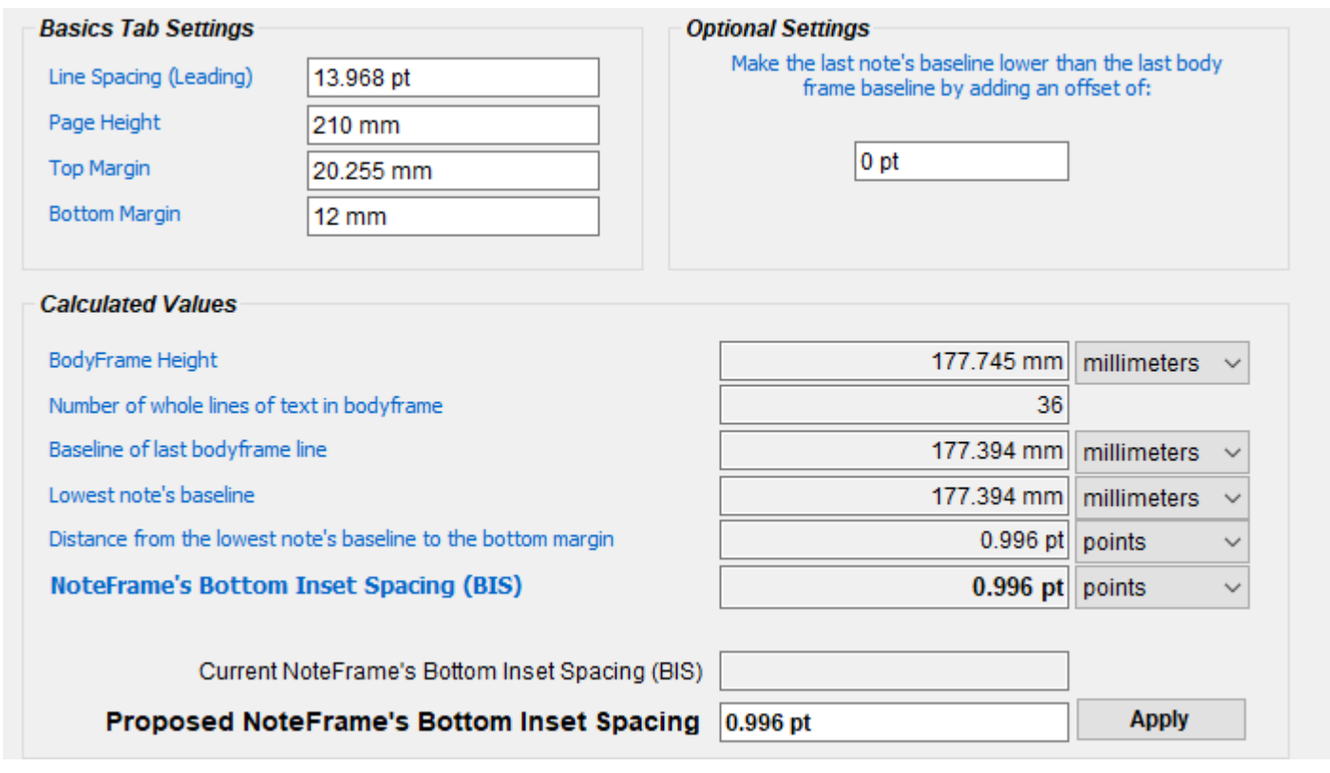


Note: If you’ve used the Alignment Settings Helper to ensure that there is no wasted vertical space, then this BIS distance will normally be the same as that produced by the “Descender Padding” setting. If you haven’t, the BIS distance will also contain the wasted space.

However, PA6 now correctly calculates and applies the correct BIS in all versions of InDesign *if it is set to zero*, which is its default setting.

Now that that works, the only reason to use this page is if for some rare reason you want the last note’s baseline to be offset from the baseline grid. For this, supply a non-zero value for the “optional setting”, and click Apply.

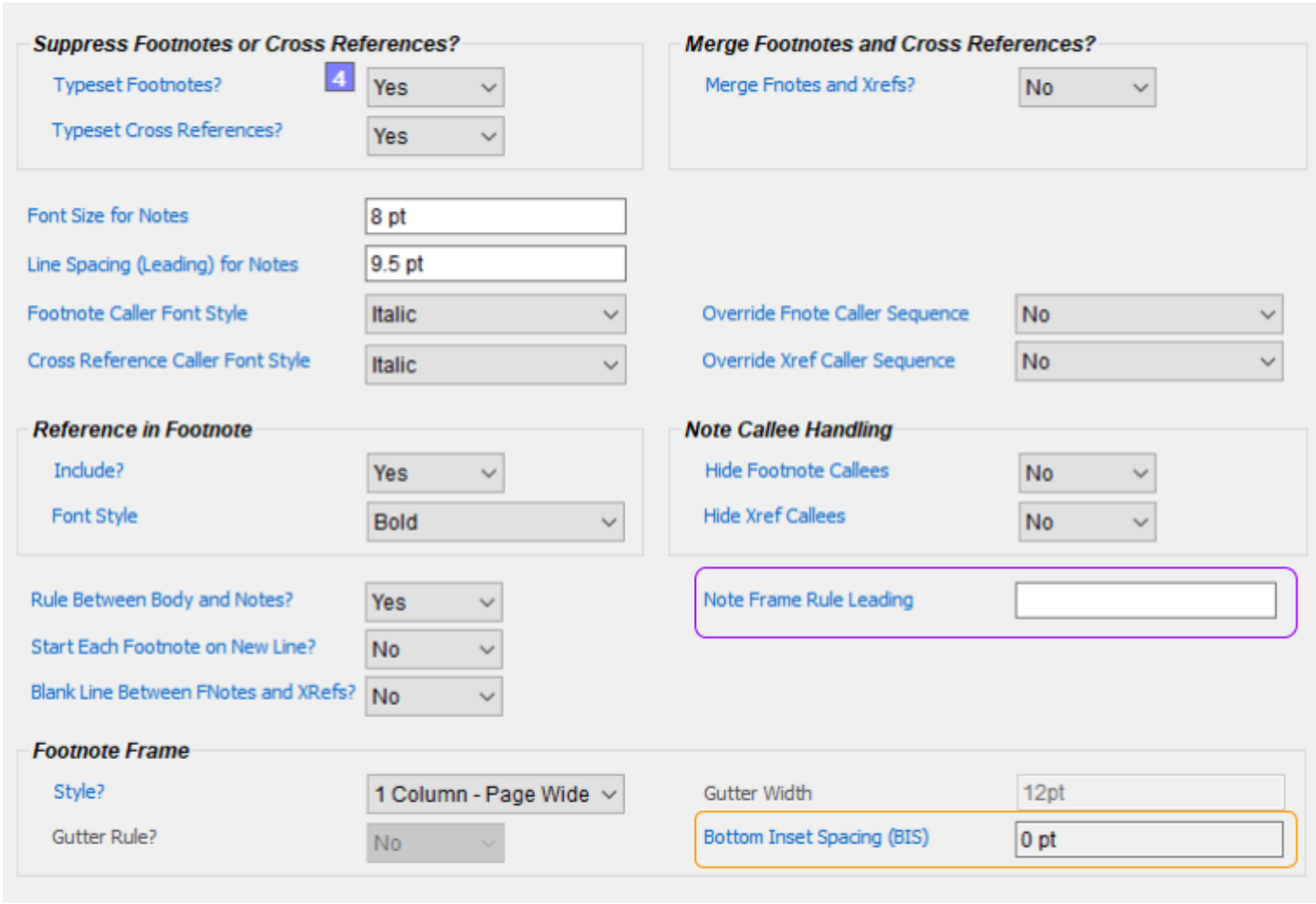
Note: If what you actually need is to move *all* text (whether verse or note) up from the bottom of the main text frame (the “pink box”), simply use the “Descender Padding” setting on the Alignment Settings Helper tab, rather than adding an offset here.



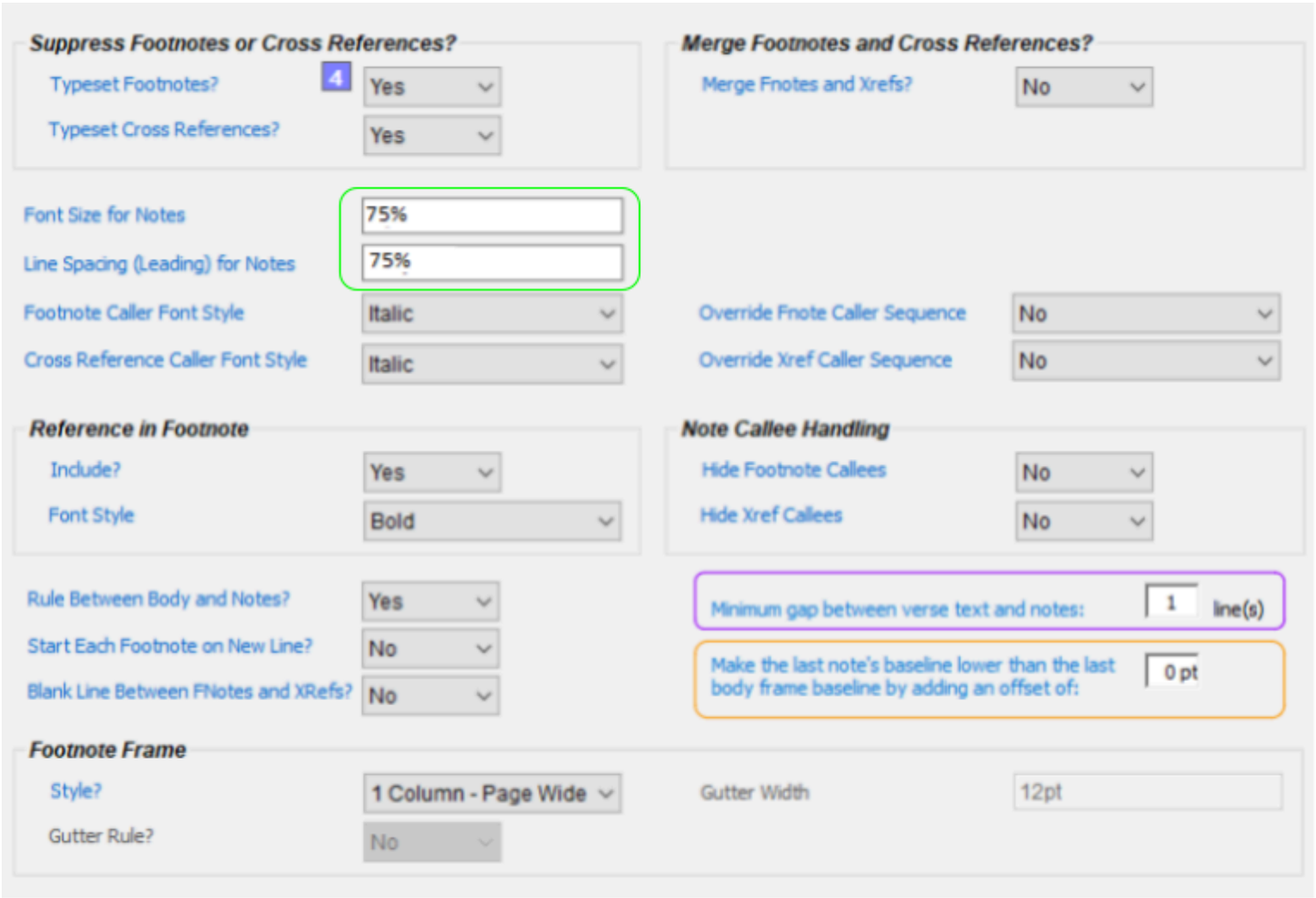
Feature Requests:

- If the baseline offset setting is truly needed for the purpose of creating an offset between the note and verse baselines, and not merely to create space between the baseline of the notes and the bottom of the pink box (which is already provided for with the Descender Padding setting), then the best place to retain it is as a setting on the Footnotes tab. Otherwise, eliminate it.
- Either way, the explicit BIS setting can be removed from the Footnotes tab. It should be calculated automatically at document-creation time.
- Eliminate the entire **Bottom Inset Spacing** tab. Users will never need to see this.

The requests in this section and the previous section would change the **Footnotes** tab from looking like this:



to looking like this (assuming the baseline offset setting is in fact necessary):



Since I'm proposing keeping the BIS setting hidden from the user interface, the question arises: What about existing project settings or stylesheets that have non-zero BIS settings? How do you update the settings so that they will produce the same output?

Quite simply, you do the BIS calculation backwards to determine which offset setting would produce this BIS setting. Store that as the job/stylesheet's offset setting. In almost all cases (when BIS was set explicitly so it would work with InDesign 5.5), the resulting offset that you calculate back to will be zero, but for those rare cases that used other values, this will preserve the job /stylesheet's original behavior.