Typesetting in Aegisub

updates: 2012-05-06 - added a section for layers, updated advanced, moving and mocha

Read this, experiment, read it again, experiment some more etc.

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• Aligning Signs

\frx \fry \frz \org \fax \fay

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Yeah, what it says ^

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Typesetting: Creating Styles

The first thing you'll want to do before you start typesetting is to create some styles. You do that in the Styles Manager / Styles Editor, which looks like this:

First you need a Default style, which will be used for all the regular lines. It already exists when you open Aegisub, but looks terrible, so you'll modify it. First you need to **choose a font**. This is an important choice, because you'll be using the font for all episodes of the show and people will have to be able to read it. So you need one that is easy to read, doesn't have any distracting, unnecessary decorative elements, and isn't ugly. In Commie it will most likely be LTFinnegan Medium, because if you try anything else, RHExcelion will change it to Finnegan anyway. You'll have to deal with it for now. Only when you become a boss typesetter, will you be able to make your own choice for the default font and get away with it (maybe).

Next you need a reasonable **font size**. That is related to script resolution. Mostly you'll use 1280x720. Even if you were in a group that does 720p and 480p, I'd still recommend making scripts in 720, since it will work for 480p just the same and lets you have more detail in almost everything. To determine what the right size is, you can use a long line from an existing script, and just see how it looks with the size you want. It shouldn't be too big so that you don't get 3-liners, and it shouldn't be too small 'cause then you can't read it. (duh)

Depending on what kind of font you choose, you may want to check the box for **Bold**, since some fonts look bad in regular mode but good in bold. You will not use **Italic** for the default font, because that's dumb, and you will most certainly not use Underline and Strikeout, because that's even a lot dumber.

Then you have the colors. **Primary color** is obviously the main one. I strongly suggest you don't use anything other than white for the default font. You may think something else looks cool, but it won't seem so cool when you have to read it for 20 minutes.

**Secondary color** is mostly just for karaoke, therefore quite irrelevant, especially in Commie.

**Outline color** is for the border. Again, for the default font, use black or at least something very dark.

**Shadow color** should clearly be black, because things really don't cast green shadows.

Under the colors you see boxes with zeroes where you can set transparency for each of the colors. 0 is fully visible, 255 is fully invisible. Clearly 0 for Primary (and secondary), possibly a low non-zero value for Outline, if you know what you're doing (but recommended 0), and something in the range of 120-200 for the shadow (still talking about default font), because shadow with no transparency will make you look like some retard who learned typesetting in Hadena.

**Margins** are important as well. I don't suppose I have to explain why it's bad if the margins are either too small or too large. If you actually need that explained, give up on being a typesetter and save us the trouble of trying to teach you. Reasonable left\right margin for 720p is around 80-110, reasonable vertical margin (that means both top and bottom) is around 30-40.

**Alignment** is obviously 2 for the default subs, and usually 8 for default signs. 1, 3, 7 or 9 can be useful for OP/ED.

**Outline / border size.** For the default font, don't try to invent anything much, it has to be readable before anything else, so no ultra thin lines, and no crazy borders thicker than the main font. 1.5-2 will probably work fine but depends on the font etc.
**Shadow distance.** For default font, I advise not to use shadow at all, ie. zero, but if you really want to, make it a low value (like 1 or even less) and at least half transparent. Unlike all the previous values, border and shadow don't have to be whole numbers, so you can use something like 0.3.

**Scaling.** If your font looks good but is too narrow or wide, you can adjust that here. And again, for the default font, don't do anything silly.

**Rotation.** What? Until now I never noticed this was even there. Can't imagine you'd ever need it.

**Spacing.** This may be useful for typesetting signs but probably not for the default font. Increases spaces between letters, obviously.

**Encoding...** is probably useful if you’re making chinese subtitles. Which you’re probably not. So whatever.

That takes care of the default font.

You will certainly want to have more styles than just the default. You'll need a style for the OP and ED and probably for episode titles. You'll create them by simply clicking on **New** and then it’s back to what we’ve just gone through... starting with a new name. For OP/ED you can divert from the default values much more - all the colors, border, shadow, size, scaling, spacing... are pretty much without limitation. For the episode title you’ll obviously be picking something that resembles the original title on screen.

After that you can create as many styles as you want for whatever you need to typeset. Some people create one style for typesetting and then override everything with tags for each sign. I think that’s pretty silly, gives you extra work, and swarms the script with unnecessary tags. I prefer to create a separate style at least for each font I’m gonna use, since it’s a lot more convenient than changing the font with tags. And obviously if there are certain kinds of signs that are used repeatedly throughout the show, it’s good to have a style for each of those.

How many styles it’s useful to have depends on the amount and type of signs in whatever you’re typesetting. Sometimes you’ll want 2 styles for the same font. For example one black and one white, or one with border and shadow and one without. If the episode has 20 signs with that font, 10 of them white and 10 black, I’ll create 2 styles rather than having only a white one and using the \c\&H000000\& tag 10 times. To do that, you create one style, then click on **Copy**, change the name and the one thing you want different, like color. This can be used even for alignments. When you have the same kind of sign 10 times on the left and 10 times on the right, you can have 2 styles rather than typing \an? 10 times. After all switching styles is easy:
One last note. Pay attention to what fonts you’re choosing. Remember each font has to be muxed into the mkv, so don’t pick 10 MB fonts. Any font, even a fancy one, should be under 1 MB. The only exception is if you need to use kanji. From the list of fonts in Aegisub, avoid those that start with @, avoid those that have Adobe or MS in the name, as those are likely to be huge.

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Typesetting Basics

In order to typeset a sign, you need to time it first. As this needs to be precise, you don't do it on the audio track like with regular lines. Signs need to be frame timed, because if your sign is one frame off, you belong in Hadena. So you rough time the sign first, whether on the audio or by inputing the timecode you got from the translator/typist/editor. Then you go frame by frame with arrow keys till you find the first frame where the sign appears (the relevant line must be selected in the script). Then you click the first of the blue icons here:

That sets the start time. Use arrow keys to check if you did it right. Then navigate to the last frame the sign is visible on and click the second one. Again by if it's right. The first one sets the time at the start of the visible frame, the second one at the end, so if you use both at the same frame, the sign will be visible on that frame, in other words the duration of the sign will not be zero. This can be used for typesetting signs frame by frame by hand.

Many signs start/end at a keyframe so you can use the audio track for those, for others you'll need this method.

When you've timed your signs, you can begin typesetting. You already know how to create styles, so you'll make one. If you need to override anything, you'll use a few tags like \fs \bord \shad \an etc. You should know all the basic tags and what they do from here. Border is probably what you'll be changing the most often, maybe the shadow and font size, so you should remember \bord \shad \fs at least. You may also switch between regular and bold quite a bit, but bold/italics have buttons above the typing area so no need to type those.

Let's begin. Here's a simple typeset...
This is something that will appear in every episode so you want to set as much as possible in the style, so that you don’t have to type tags each time. The only tag I add here is \fad. The font, colors and border are set in the style.

Don’t make the mistake of using the default (or any extreme) values!

For example the default has a shadow, but you definitely don’t want a shadow here, so make sure you set it to 0.
Also don’t just assume it’s black and white. If you do that, you’re going Hadena style. Get the actual color from the japanese sign with the eyedropper tool.
Aside from the colors and the border, what will make a difference between a good and bad typeset here is the font choice.
So don’t just take some basic serif or sans serif font, or something like ComicSans, but find something that will actually match and look good.
Speaking of which, you need to know your fonts, and you need to have them in the first place.

Now about that fade...
Use arrow keys to go frame by frame and find the place where the fade of the jp sign ends. ^ Check the numbers here.
They refer to the currently visible frame, in relation to the start/end time of the line you have selected.
So this frame is 898ms after the start of your sign and 4102ms before the end of it. If this is where the fade in ends, you need about 900ms fade in.
No need to be too precise, one frame is about 40ms, so 10ms more or less won’t make a difference. You will then have \fad(900,0).
If there’s lead out too, you do the same but use the second number.
Another example of a title. This one uses \blur{10} (for the border). Be aware that using this much blur may cause lag, so only use it on simple static signs.

Notice the positioning, too. The top of the typesets is aligned with the top of the Japanese sign. Don’t just throw the signs somewhere randomly, try to align them with something. Also for episode titles and such, try to keep the same positioning in following episodes.

A few notes on using \blur.
It works differently depending on the borders and shadows you’re using.

This is text with no border, no shadow, no blur... \bord{0}\shad{0}\blur{0}:

Blur Test

No border, no shadow, with blur... \bord{0}\shad{0}\blur{2}:
Border, no shadow, blur... `\bord4\shad0\blur2`:

You see it will only blur the outline, not the body.

Border, shadow, no blur... `\bord4\shad4\blur0`:

Border, shadow, blur... `\bord4\shad4\blur2`:

This blurs both the border and shadow, but not the body.

No border, shadow, blur... `\bord0\shad4\blur2`:

This, however, will blur both the shadow AND the body.

So you see it's the border that determines whether the body will be blurred or not.

If you wanted to blur the shadow but not the body, you could add little outline, like `\bord0.1` and make it (semi)transparent. (Transparency explained in the "ASS Tags" link)

This is `\bord0.1\3a&H80\shad4\blur2`:
You can't separate the border from shadow for blurring.
If you use both, both will be blurred.
To bypass that, you'd have to use 2 layers. More on that later.

Same if you want to blur the outline AND the body, you need layers.
It would look like this:

"Test" is regular mode, "Blur" is 2 layers with the body blurred.
Again, more on that in the "Layers" section.

Note: This works the same with 'blur edges' - \be.
Experiment to find out the difference between one and the other (shows more with higher values).

Two things related to blur:

**Blur is the most essential tag for typesetting.**
Signs without blur look like shit, so never forget to use it.
What I do before I start is to use the "Add edgeblur" script which adds \be1 to all selected lines [signs] and then use ctrl+h to replace \be1 with \blur0.5.
That way you start with blur already present on all signs. 0.5-0.6 will work most of the time. You’ll change it to higher when needed.

**Sort the script by time!**
[menu > Timing > Sort by Time]
If you don’t do this, vsfilter will screw up blur pretty much whenever there are two or more lines visible on the screen at the same time.

Top is sorted by time:
Bottom is not sorted by time. You can see the border on the default style is screwed up. This and worse things happen when you don't sort the script by time. Of course you don't need that when working, and it's more convenient to have different sorting while working, but always sort the final script you're putting in a release.

Back to the basics...
Here's another title. Very simple but beginners will often fail. This one has a shadow but does not have a border. Beginners will often use a border because there's something black around there and who would bother to look carefully... border is first so... bam! Well, nope. If your style has border, use `\texttt{\textbackslash bord0}` to kill it. Align your typeset properly. It would be dumb if it was clearly closer to one side. Don't put it under the sign here because it might overlap with main dialogue. Other things to pay attention to: the shadow in this case is not transparent at all; get the shadow distance close enough to the original; try to match the thickness of the letters; and for god's sake don't use a sans serif font like Arial for this.

Alternatives that work:

**The Trumpeter at the Start Line**
『スタートラインのラッパ吹き』
These two are fine. The thickness matches, they have some pointy ends like the original, horizontal lines a bit thinner than the vertical ones... everything all right.

These two are not bad, but not as good as the previous examples. They're a bit too roundish, lacking any pointy/thin parts.

Alternatives that don't work:

Sans Serif doesn't fit here. Square ends don't match at all. Looks dull and inelegant.
While handwriting is often useful for typesetting anime, because of the calligraphic nature of kanji, here the kanji is actually pretty simple and orderly. The handwriting looks too disorganized.
Next episode title. Pretty simple - get the sizes right, choose a reasonable alignment, get the border color right and use blur. You can see it's pretty easy to match the original, so I don't want to see things like this:
Next Episode
Musashi's Mr. Impossible

Using thin outline without blur = nope. Using thick sans serif font = nope. Vertically it's not aligned with anything. That's a fail on a sign that takes a minute to do right.
Here's something more interesting. In case it wasn't clear, the smaller circles with To Ra Do Ra are type set.

So what you need is letters and circles. The easiest way to make circles is to use a font with symbols, like wingdings. Find out which letter is a circle and use that.

Then find a font that has round edges and isn't too thick. Mine was actually too thin but I solved it by adding some outline in the same color as the primary - white.

It was also narrow so I used Vscx120-150, don't remember. All of this can be set in the style so no tags needed.

To get the letters exactly in the middle of the circles, I used \an5 - align to centre. That way you can use the same \pos coordinates for both the circle and letters and you know it's right in the centre.

Now you just need to find the right place to put the circles. Make sure the vertical coordinate is the same for all of them, and that the spaces between them are always the same.

The only thing left is to get the right color for each circle. Tools for colors are above the typing area, use the eyedropper tool to get the exact ones you need.
Simple typesets for some names. Handwriting font, match the color, no border, no shadow, use blur. Easy.

This close up is different than what they had in the first screenshot. It's thicker and darker so you can use bold, or outline in the same color.
White font, thick dark red border, no reason to fail on this. Clearly here you need some handwriting/cartoonish font, and not some Arial/Times New Roman thing.
Sometimes you have a bit more to typeset than one line. Here you need a simple sans serif font. I used this one not because it was the best but because I was already using it in the episode and it was good enough.

Aside from the "49 New Messages" in white this is all done in one line.

Dialogue: 0:08:08.63,0:08:08.67,mail,Caption,0000,0000,0000,\blur0.8\c&HBD8B5F&\pos(126,186)\Subject

Subject             Thanks! \Subject             This is

Subject             Chihaya\Subject             It's getting warmer\Subject             It's starting to rain\Subject             Rain was leaking into our clubroom\Subject             This is our clubroom.

You can see there are 4 line breaks between the text lines (\n\n\n\n) so that I don't have to make 6+ separate script lines to typeset. Choose font size that will make the lines fit in between the Japanese lines. When you have the font size, make spaces between the Subject and the rest of each line. You could typeset each line separately but... the whole thing was scrolling up in a non-linear fashion. That also means you can't use \move. So I did this frame by frame, always changing just the \pos tag (you may notice the whole line has more text than you see on the screen - this text scrolls up in the following frames).

It was about 20 frames so I had 20 lines in the script. If you typeset each line of text separately, you'd have more than 10 times as many lines in the script.

A 20-frame sign is usually pretty pointless to typeset, but the way I did this wasn't really difficult and didn't take much time so I did it anyway.
This is not bad. Not something to be ashamed of but... since it will take 1 minute to make it look much better, why not do that? These guys pretty much used the same style for typesetting all (or at least most of) the signs, but it's not that much work to modify them. You can see the TS is black/white while the jp isn't. So change the black to the color from the jp sign and make the white shadow a bit transparent. You can easily make this so natural that it won't even look like it was typeset. You could also use \sfcx110 or 120 for a better match.
So I gave somebody the task of typesetting this... and this was his first attempt.
Positioning is ok, 1 point there. Colors are fine as well. Another point. Alignment of the text is... well, pretty default. More on that in the next chapter.
I don't know why the red sign is serif and the rest is sans serif when the jp signs are all the same font. Also the red looks like crap on the light grey background.
All that would be passable for a beginner if it wasn't for one obvious problem - no blur. Just adding blur would make it look much better even with the other problems.
Here for reference is my own typesetting. You can see the blur makes it blend in beautifully, though the slant helps a lot as well, and the font is much better than the Arial-ish thing above. As a sidenote, see the hand moving "over" the Guard Ships sign? That can be done with the \clip tag. More on that later.

That should cover the basics. Just a few more notes. Sometimes instead of blur you can use \be - blur edges. With value 1 they're pretty much the same but with higher values you'll see the difference. Other tags you can use to override the style are \fscx, \fscy, \fsp... again, you should know all these from the link mentioned at the top. I didn't explain \pos because it's so basic that if you can't figure it out on your own, you're hopeless. \an can be useful for signs with a line break - \N. Type something short, then \N, then something long, like "This is \N a meaningless test sentence." Use \pos to place it somewhere on the screen. Then add \an9 or \an1 to see how the text changes alignment while using \pos.

One last note about changing margins. Let's use this screenshot:
Numbers 5, 6 and 7 are left/right/vertical margin.
Change those numbers to change the margin. The values don't add up, they override the defaults.
It's only meaningful when you're NOT using the \pos tag, mostly for default dialogue.
You can use this if you need to move the subs to avoid overlapping with something else.
For example changing right margin to 500 will move them to the left, changing vertical to 100 will move them up etc.
K thx, now go practice.

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Aligning signs is actually pretty easy, but for some reason many typesetters fail in this area all the time. I'm not sure if they don't know how to do this or they're just too lazy to do it right, but it's pretty lame, because just aligning the sign correctly will make it look a lot better.

The tags you use for this are the three rotations - \frz, \frx, \fry, shearing - \fax, \fay, and to get the \frx and \fry right, the origin point of the rotations - \org.

Let's try a basic example. Let's say you want to put a sign on this balcony:

This is pretty typical for anime. You will need to make lots of signs of this type, whether it's the notorious nurse's room at school, a sign above or on the door of an office, various signs on buildings etc. These signs usually have a horizontal slant, but vertically they're pretty much straight.

This is important to acknowledge if you don't want the sign to look like shit...
This could be the first thing to do - use \frz to rotate the sign. Unfortunately that's where some typesetters end. If you can call them typesetters. It's the same people who will also pick an incredibly shitty font, often some M$ or Adobe nonsense that looks like crap but is 10 MB large. Anyway, we'll get to fonts later...
So if you actually want to do some real typesetting, here's the next step...

The tag you use here is \fax. When used with a negative value, like \fax-0.1, the effect is like using italics. With positive values it leans in the other direction. You have to use low values, usually in the range of 0.1-0.5. It seems that many typesetters don't even know this tag, or are too lazy to use it because unlike the rotations this one doesn't have a tool in aegisub and has to be typed out.
It is however more useful than \frx\fry, because anime doesn't have much of 3D effects.
Most of the time it's really just horizontal slant while vertically it stays the same.

So now you have a sign that's fairly well aligned. Now you just need it to blend in a bit better...

...which you achieve by changing the color to match whatever is relevant in the picture.
Here I don't have an original sign to imitate, so I just go with the outline of the balcony.
You will also notice that I used blur.
On signs, using at least 0.5 blur is a must if you don't want them to look obviously added and out of place.

So now you have a pretty decent sign. You might as well go with it.
If you look more carefully though, you'll see that it's aligned to the bottom of the balcony but not the top. Why is that?
Well, because here you actually have a sort of 3D effect, where the left end of the balcony is taller than the right.
So what now? Since we've gone this far, we're not gonna redo it with rotations, so we'll use a simple trick...

\pos(234,380)\b1\frz350\fax0.2\3c&H9E9491&\blur0.5
Looks better, doesn't it? (By the way if you don't see the difference here, you should probably not be a typesetter.)

So what sorcery is this? Very simple. The original font size was 50.

If you want the end of the sign to look smaller than the beginning, instead of all kinds of rotating and skewing you can do this...

Sample Text

As you can see, after each 2 letters I decreased the font size by 1.

If you're learning to typeset, this should be good enough.
If you're pro, you'll notice the end of the sign is still a bit too tall, the 'p' is too close to the bottom etc.
And obviously you'll want something better than Arial. Then again if you were a pro, you wouldn't be reading this guide.

So we have what we wanted, but let's look at other ways of doing this.
This is without using \frz and \fax, but using \fay instead.

Often this is more convenient because you don't have to use any rotation. It'll work fine for signs on/above doors much of the time.
The problem with \fay is that you can't use additional tags in the text like I did for the font size before, because vsfilter fail or something.

The last way to do this that I'm gonna mention, possibly the most pro if you can do it right [but epic fail if you can't],
is using just the rotations and moving the origin point.
This means we're gonna use \frx and \fry, instead of \fax and \fay and do it right.
Why would I do that when I've described how \fax\fay is a lot more convenient?
Because the rotations actually *can* give you a 3D effect when you need it.
And we've noticed that the balcony here is "closer" on the left.

We've managed to bypass it pretty well with the font size, but that may not always work. Like when the sign is only 2-3 BIG letters.

First let's look at what will happen if you use rotations without moving the origin point.

You'll see many "typesetters" create these abominations. It's possibly even worse than our first example in black color way above.

What you have here is a sign where maybe 2 out of 10 letters are aligned somewhat correctly.
The rest is FUBAR. This is like "I has Aegisub so I can into typesetting yeah?"

Nope. You can't.

So what now?

If you try playing with those rotations, you may find out that no matter how much you rotate it around, it just doesn't fit.
It will always be aligned at one end and not the other. Why?
Because if your default alignment is \an2 or \an8, it will always align to a vertical line that goes through the centre of the sign.
That means both sides of the text will lean towards the centre, like you see above.
Now if you use \an1, 3, 4, 6, 7 or 9, you may get slightly better results, but still pretty derp.

So what you need is to move the origin point.
The tag is \org(x,y), but you can use the rotation tool.
You'll use the tool for \frx\fry and rotate slightly to the side - like \fry7.

Usually you want to use only a little of these rotations and get the rest done with \org.
If you use too much, you'll get too much difference between one side and the other.

When you adjust \fry, you grab the triangle in the centre of the grid and move it.
In the tags you'll see \org appear and you'll notice the sign changes alignment as you move it.
Then you just have to go and find where to drag it to make it align right. It may often be off the screen.
Once you go off the screen and let go, you won't be able to grab the triangle again but you can adjust the numbers in the tag.
But since that's inconvenient, try to learn to get it right the first time by dragging.

Now, you'll notice that while this will let you get the alignment right, it may drag the whole sign away from its position.
This is not a problem, you'll get it back, just get it to align right first.
When it seems fairly good, you switch to the Drag tool. You will now see 2 points you can drag - the regular square and the triangle.

You won't see the triangle if it's off the screen but the red line will tell you roughly where it is.

So now you drag the the sign back to position with the square. If it misaligns the sign, you need to drag the triangle a bit again.

It may take a while to balance them out, especially if the triangle is off screen & you have to change the numbers in the tag or try again.

With a bit of practice though, you'll learn to do it more easily. More importantly, you'll get some good results...

You can see that the sign looks pretty good and the only tags creating the alignment are \fry and \org.

(\frx0 can be deleted, it's just that the tool adds both tags even if they're 0)

The script resolution is 1280x720 so you see the origin point is off the screen in this case.

This method is especially useful when you need to do something more complicated, like you'll see in the last example at the bottom of the page.

Of course you can still fine tune this using \fax and/or \frz.

You may use various approaches and combine the tags as you wish. On static signs it's not a problem, but with movement, transforms (\t), or too much blur, too many tags can make it CPU heavy, so use with care.

So, that's about it. Now you know how to align signs and do it right.

A few examples of signs I've found in some groups' releases...
On the left is the original sign, on the right is my quick adjustment.
Clearly this looks bad and totally out of place - alignment is terrible, even the \frz isn't quite right.
You can also see the color is off. I didn't like the choice of font either but that's the least of its problem.
Even my sign doesn't look too great, but at least it doesn't look retarded.

While in the previous example it was only \frz and good bye, here some "pro" went for \frx and \fry, clearly without a clue how to use it.
It is sad, because it only takes a minute to do what I did on the right. Whoever did the one on the left should be fired.
I wanted to just quickly fix this to make an example so I went for \fay. If I actually wanted to release this,
I'd use \frz and \fax, and then change color after every 2-3 letters to match the change of color on the japanese sign.
Now this... is admittedly not an easy one but this implementation is pretty poor, especially with each line having different (mis)alignment. The "When would be good?" line is so bad that I'm guessing the author must have been in quite a hurry to finish this.

Here's where \fax and \fay won't be enough and you'll have to use rotations, and you'll have to use the \org tag, if you really want it to look good. One other thing you'll have to use is blur. Its lack in the one above makes it even worse. And the colors are off as well. It will certainly take more than a minute, possibly even 10-15 minutes to get all the 4 lines right.

But hell, if you look at the one above, and the one below that I made, you'll have to admit that it's worth the time.
No subject

Yes, I'm fine

はい、大丈夫ですか？
いつがいいですか？ (みう)

When would be good? (Miu)

- End -
Typesetting: Positioning Signs

There are several things that determine how good a typeset is and how well it blends in. Obviously the colors and sizes of font, border, shadow. Then of course the choice of font. The next thing would be the positioning of the sign.

Beginners will have this idea that the typeset for a sign should be as close as possible to the original sign. Please get this idea out of your head, because half of the time that won't work very well. It is especially unnecessary for typesetting titles. If it's a sign that belongs to a specific place on the screen, then sure, you wanna get your TS close to that. But an episode title has little relation to what's on screen in terms of placement, so no need to go crazy trying to match the position and orientation of the sign while sacrificing readability.

I used an episode of Nichijou for a test, here are the results from some guys.

Kanji is often written top-to-bottom, rather than left-to-right. It works great with kanji. It does not with English. So don't try rotating the text like this just to match the orientation of the japanese sign. It decreases readability and doesn't really look that great.

You might think of using M | N | O | N | I | N | V | N | A | N | T | N | O | N | N. In other words top-to-bottom, without the rotation. Well... try it. For one, you will usually have large spaces between the letters. But even if you pick a font that doesn't do that, or do each letter separately, you'll run into another problem. Kanji has pretty consistent width. English letters don't. The difference in width between M and i can be anywhere from 500-1000%, depending on the font. So this will usually not work either.

Also here the white ‘shadow’ is missing and the font is pretty plain and boring.
This is a pretty good placement. It's much better to sacrifice font size and orientation if the result is well readable and looks good. The shadow is a bit too thin and jagged but this is overall fine.

You can do something like this. Pick a font that will look good, you can make it large enough so that it's both readable and close to the size of the kanji, and keep at least some kind of alignment when positioning it, in this case the top aligned with top of the kanji.
You can even put it on the other side of the screen for overall symmetry.
If you want it top-to-bottom, it may be better this way than rotating, but I'd say it's almost always better to keep it left-to-right.
Trying to split the text like this will rarely work well for a number of reasons, like the width inconsistency that you see here.

Another title. Here I think if the font was larger, to match the span on the kanji precisely, thicker, and placed a bit farther, it might actually not look too bad (putting aside the readability issue)...
...but clearly this works much better. It's aligned to the centre of the kanji, looks fine.

Here aligned to top, with a different font.

There's never one "correct" place for typesets. Rather than following some rigid logic for where a sign should be, just make it "look good." It doesn't even necessarily have to be aligned with the original sign in any way.
Here it pretty much ignores the jp sign. Instead it's in the middle of the "background" area - the sky - where it doesn't interfere with the foreground. It's kind of where you'd put it in the first place, if the jp one wasn't there at all... pretty much the most natural place for a title on this screen, assuming the title is horizontal.

If the jp is in the middle, and you can't exactly fit the typeset in the middle as well, you may split it like this (if the words allow it).
This should be pretty obvious. You don’t want the sign over Yukko’s head, and you don’t want it over the papers above either. The neutral green area is the most suitable place. If you split the title in 2 lines, you could put it in the large green area on the left.

Here you have 2 typesets and main dialogue, so first of all you want to avoid any of them overlapping. The title is where it is pretty much out of necessity. There’s hardly any other place suitable for it. The office sign… many would try to fit it on the white board, along with the Japanese.
That can certainly be done, but you'll have to have really small font size and it'll still look cramped. So I put it above, and matched the width of the sign and thickness of the letters roughly. It looked too artificial without that shadow, so that was added to give it some sense of space, even though as a "shadow" it's illogical.

Here again trying to squeeze the Shino Labs on the signboard would be frustratingly difficult & just wouldn't look good no matter what.

On an unrelated note, did you know sharks can fly?

Anyway...

One other option is to simply replace the jp sign with the English one. That will, however, only work well if the background is one solid color. Here's one where it will be simple enough:
You'll be creating 2 layers. One will just draw a blue rectangle over the kanji. The other will put the English text over it.

 Normally I make the actual sign first. Then I duplicate it and delete content. Then paste this instead: \( \texttt{m 0 0 l 100 0 100 0 100} \)\( \texttt{p0} \)

 That's a basic square in drawing mode. Nuke border/shadow if present.

 Expand it using the scaling tool \( \texttt{fsx} \texttt{fsy} \) to the size needed to cover the kanji. Add \texttt{blur1} to make the edges softer to prevent them from being noticeable.

 Match the blue color and adjust layers so that text is on top of the rectangle. The result will look like this:

And just in case this was difficult to comprehend, here it's disassembled:

You could create more complex shapes than a rectangle. More on drawing and other stuff in this section.

...possibly more examples coming later...
There are several kinds of moving signs.
Ones that are moving in a constant linear fashion, ones that are accelerating/decelerating, and ones that do various other things - rotate, shake, etc.

Linear movement is simple. You use `\move(x1,y1, x2, y2)`.
Let's say you want that fish on the bottom right follow the kanji moving to the left.

First you use the Drag tool and position the fish in the first frame. Then you click the blue arrow that the other blue arrow is pointing at. That switches from `\pos` to `\move`. Then you click on the right green arrow the other green arrow is pointing at. That gets you to the last frame of this fish. That is assuming you've timed your fish correctly. If you haven't then you're dumb, because what are you gonna do with a timeless fish? Anyway...
When on the last frame, you grab the circle that appeared over the square (on the fish's belly) and drag the fish to where it's supposed to have swum.
Like there^: You'll get a tag like this: `{\move(1195,650,1009,652,0,799)}<°)))><
Now when you see the vertical coordinates are 650 and 652, you did it wrong.
The fish is supposed to be swimming just horizontally, not up and down, so the coordinates have to be the same. So you'll correct whichever one is wrong.

The last 2 numbers are the start frame and end frame timecodes. They are useful if the movement occurs only over a part of the sign's duration. For example if the fish changes its mind in the middle and stops swimming, the timecodes will be "0,400". If you're using the whole duration, then I suggest you remove those last 2 numbers once you've done the positioning, since they tend to make the fish 'slow down' at the last frame. It may throw the positioning off a bit, so you'll correct it by typing, because if you use the tool again, it will add those numbers again, and you'd be chasing your tail like... a fish? (or whatever animal does that, I dunno)

If the movement doesn't cover the whole duration of the sign, then whatever frame you click the square on sets the start time, and whatever frame you click the circle on sets the end time. Again you can adjust that by typing if needed. Make sure to check the video once you're finished so that you don't end up like dickpants with the sign starting god knows where and moving in the opposite direction than it was supposed to...
If you haven't done anything incredibly dumb like this, you'll still check if the fish is swimming at the right speed.
If it seems like it's getting closer to the kanji, then you change the ending X coordinate to higher value [ie. more to the right]. If fast then other way round.

OK, so... that was the easy part.
The trouble comes when the movement is not constant and linear. If that happens, you have several options.

1. Quit fansubbing.
2. \an8
3. Ignore the inconsistencies and use linear movement even if it doesn't match.
4. Use \move but split it into several phases to decrease the inconsistencies to minimum.
5. Do it right, ie. frame by frame, either using a tracking software or by hand.

ad 1. Good Bye

ad 2. If you're a beginner and the movement is difficult, you may do better using \an8 or just \pos than trying to match the movement and do it wrong. If you match the font, colors etc. the sign may look better static than if it's moving wrong, so this depends on your skill.

ad 3. This may be ok when the actual movement is not too far from a linear one and there won't be significant inconsistencies. For example if the movement is generally linear but a bit twitchy. Otherwise this option would be pretty dumb.

ad 4. This is kind of the middle way. The more phases you split it into, the better it'll look, so it's just up to you and how much time you wanna spend on it. This will mostly be useful for movement that is pretty much linear in direction, but accelerates/decelerates.
What you do is duplicate the line a few times, and time all the lines to make a sequence. So if it's 5 seconds, you can split into 5 lines, and time them (in seconds) 00-01, 01-02, etc. In reality you will need like 2-3 segments per second to make it look somewhat decent. Then you just use linear movement for each line, the next line always starting where the previous ended (or a little bit farther).

You'll get something like this:

```
Dialogue: 0,0:17:15.94,0:17:16.44,Default,,0800,0000,0000,\move(238,315,373,315)text
Dialogue: 0,0:17:16.44,0:17:17.05,Default,,0800,0000,0000,\move(377,315,465,315)text
Dialogue: 0,0:17:17.05,0:17:17.61,Default,,0800,0000,0000,\move(467,315,508,315)text
Dialogue: 0,0:17:17.61,0:17:18.16,Default,,0800,0000,0000,\move(511,315,542,315)text
Dialogue: 0,0:17:18.16,0:17:18.68,Default,,0800,0000,0000,\move(544,315,552,315)text
```

This will give you moving text that's slowing down. Obviously, since the original sign will be slowing down continuously, while this one will change speed in 4 'jumps,' those jumps will be visible. If you want better results, split into more lines. Again I recommend to nuke the last 2 numbers in the \move tag, as those will cause the jumps to be even worse.

This option lets you choose the 'quality vs. time spent on it' ratio. The more time you have or are willing to sacrifice, the better it will look. For some signs, if you make enough lines, this may look pretty good.

ad 5a - using tracking software. We use this thing called Mocha, and we now have a guide for using it here.
For only movement without scaling and rotations it's extremely efficient and highly recommended.
Scaling and rotations take a bit of skill but can be done too, to a large extent.

ad 5b - by hand. This is more effort than option 4 but the results will be pretty much perfect if you do it right.
Instead of splitting into just several segments and using \move, you'll split it into as many segments as there are frames for the sign,
and you'll be changing the \pos coordinates for each frame. As the Japanese save on animation, often 2-3 consecutive frames are the same, so sometimes you can have 2-3 frames per line instead of 1. If it's 2-3, then you'll need regular frame timing, if it's each frame, you can time the 1st line to 1 frame, right click on the line and select "Duplicate and shift by 1 frame" [or Ctrl+D].

This way you'll be getting consecutive frames, each timed to 1 frame, which is exactly what you need.

[If each 2-3 frames are the same, you can still do Ctrl+D and then "Join (keep first)" the lines that are the same.]

After that you go through all the frames and adjust position with the Drag tool.

The interesting thing is that while this method produces the best results, it's not even difficult. Pretty much all you need to be able to do is time the lines and set \pos, which is really the very basics. The problem is that it's quite time consuming and somewhat tedious.

Aside from the precision, another advantage is that you can change any other tags than \pos as well. So the sign can change color, size etc.

So, every time you have a weirdly moving sign, you have to weigh your options and decide how much effort you want to give this for what results.

One more thing to cover is signs that rotate, expand etc. You could still do this frame by frame, but usually there's a better option.

You can use the \t tag, which allows you to apply gradual change for specific tags. How it works is described here.

If you need the sign to spin 360 degrees, you'll use \t(frz360). If you need it to spin twice, it's \t(frz720).

To spin and stop after 1 second it's \t(0,1000,frz360). To do the same but start spinning slowly and accelerate it's \t(0,1000,3,frz360).

So you have \t(start time, end time, acceleration,\tag1\tag2\tag3...) as explained in Aligning Signs.

If you need it to rotate around a different point, you'll use \org for that (described in Aligning Signs).

You can combine this with \move, so it can be moving and spinning.

Other tags you can use with \t are \fscx \fscy \fsp \fs \blur and a few others, including colors. It doesn't work with everything, like \pos \org etc. Experiment with this to find out what works well and what doesn't. You can use several tags at once.

You can achieve all kinds of things with the \t tag. The main downside is that if you use too much of it, playback will lag. And it can lag A LOT.

A few more related things will be explained in the next section.

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Typesetting: Using Layers

Probably one of the most useful tools, once you make it far enough that you're actually trying to make signs look nice, is layers. You can use them for various effects. The two most important ones are:

1. You can have multiple borders/shadows
2. You can have blur between primary and outline color, which makes signs look a LOT better

If you're inventive, you can always add some extra effects to that.

^ This sign here has 2 borders - orange and dark grey. Clearly you can't make it in one line. So what you do is you make one sign, with orange border and no shadow, then duplicate it (right click on the line in script), and change one of them to larger border in dark grey and add shadow. For example you'll have \bord2 for the orange one and \bord4\shad2 for the dark grey. The important part is that the orange one has to be on top. For that purpose there's this thing called layers. You can change the layer number above the typing area, next to the start time:

^ So the orange one will be layer 1 and the other layer 0, or whatever other numbers but the orange one has to be higher. **You will also use this when regular dialogue subs overlap with signs!** The dialogue has to be on top, obviously.

Some notes about this sign: The jp doesn't have an orange border. The primary color ranges from yellow to orange. Choosing only one would make it look too plain and you can't
use a texture instead.
(Well, you could probably imitate it somehow if you were inventive but this is about basics.)
I wanted to have both yellow and orange in there and this was the easiest way to do that. Also the font was pretty thin and this made it thicker.

If you're looking carefully and actually paying attention, you have noticed the white "dots" on the sign.
The jp sign has light reflecting off of it (coming from top left), creating blurry white areas.
Since I like doing things that nobody else does, I wanted to try to imitate this somehow.
It's a kind of silly idea that nobody would bother even thinking of, much less trying to do it, but for me, work without creativity would be too boring.
Obviously this is nothing like real light effects, but I think considering the tools available it's not all that bad.
So how did I do this? Create a third line, layer 3, white color, no border/shadow. Type some commas with a few spaces between them. Use a lot of blur.
Then just figure out the sizes and spaces and rotation etc. to make the dots fit into places you want them at (keeping the light from top left pattern). That's it.

This sign still has some flaws and could be better but let's just say that if you have a script with 30 signs of varying difficulty and you need to sleep soon, you don't always do your best.

I use double layer signs quite often mostly for one specific reason. If you check the sign above, you'll see that despite the blur on the outside, the border between yellow and orange is sharp.
That's because when you use blur, it only blurs whatever's on the outside, ie. if you have an Outline, it won't blur the inner letters.
That is sometimes a problem because the japanese signs are usually blurred on the inside as well, and the sharp edge between the inside and the border just looks bad.
The solution to that is to create another layer without the border and blur it as well.
In other words you duplicate the sign, make one layer 1 and add \bord0. You already have some blur in the tags so that will apply, though you may want to use less than on the outside.
You can see the effect here:

The first 2 letters "Re" are only one layer, **without** the inner blur. The rest is 2 layers as described above. The red in the "Re" is sharp and compared to the kanji looks bad.
For illustration I also added one more layer to the right half of the sign, adding the soft, blurry, reddish background.
It's the lowest layer and uses reddish border with lots of blur. I didn't use this in the release, this is just to show that it can be done.
It's actually \blur12 and the sign is fading in and would have 3 layers, so it might lag.

This sign could look much better - I think I did this on a workraw, meaning small, blocky video with poor colors, so I couldn't see details very well.
Anyway, 12 episodes got released at this point and no one's complained so far so I guess it's ok.
This was quite a challenge, for several reasons.
Blue letters, white edge on the left, black on the right, and blurry shadow behind it... what to do?
On top of that, the letters were appearing one by one... but before we get to that, we have to deal with the basic design first.
Obvious things like font, size, position and main color should be... obvious. If we want the white/black edges and the shadow, we'll need at least 3 layers.
You can probably figure out how to do the black edge on the right and the blurry shadow. The black edge is regular shadow, and the background is another layer with more blur.
But what about the white? Aside from needing another layer for that. Well, there are some extra tags that will help us.
Besides \bord there's also \xbord and \ybord, and besides \shad, there's \xshad and \yshad.
This allows you to extend the border differently vertically than horizontally, and make the shadow be cast in any direction.
Here I needed shadow (white) so I used \xshad-3\yshad-1, which positions the shadow 1 pixel above and 3 pixels to the left (yes, negative values to go up and left).
The whole thing looked like this:

layer 2: \fad(0,600)\fs150\fax0.1\bord2\xshad-3\yshad-1\4a&00\blur0.8\pos(620,280)\3c&H9E362E&\4c&HE7C4B4&\c&H9A2B24&}R-Really...
layer 1: \fad(0,600)\fs150\fax0.1\bord2\yshad\4a&00\blur1\pos(620,280)\c&H9B352E&\3c&H9E362E&\4c&H250F09&}R-Really...
layer 0: \fad(0,600)\fs150\fax0.1\bord0\shad\blur4\pos(628,288)\c&H230E0C&}R-Really...

[^a&00 changes the shadow to opaque, because the default was partly transparent - it's a variation of the \alpha tag.]

Well, this was only the last part. As I said, it was appearing letter by letter. First I used \t and \clip to make it appear continuously.
Good thing was I still had only 3 lines in the script but it turned out it was lagging like hell. [Note: having 3 layers with \t on all of them is quite likely to cause lag.]
So instead I had to go for alpha timing, making it appear letter by letter (almost, because the jp has fewer letters).
This was still pretty intense but worked out without lag. It was a bit more work and I ended up with 18 lines for this sign, but it looked pretty cool.
Signs with border and blur - how to do them right

After typesetting a dozen shows I have realized that making 2 layers for all signs with a border is a pretty essential thing if you want the signs to look good. It's pretty much one of the most important things that will distinguish a good typeset from a mediocre one, without much effort. It's fairly simple and easy to do but it took me some time to figure out how to do it right.

The first step was to just make 2 layers and nuke border on the top one [of course blur would be there from the beginning, so by duplicating the line it's on both]. Then I realized that there's a problem with that. Let's say you have black primary color and white outline. You make 2 layers, nuke the border on the top one, and have let's say \blur0.6. The result, however, will not be real blur0.6 on the black color. The blurred outline has by definition some transparency. Which means that the sharp black border from the bottom layer is still partly noticeable. How much will depend on the colors. Sometimes it looks pretty good, other times it's almost as sharp as it was in one line.

Here we have two examples. For both of them - left is one line, middle is two lines as described above, right is the correct way [we'll get to that in a minute]. You can see the left ones are too sharp and the right ones look good. The middle one for Touch is not bad, but the letters got a bit thicker. On the Click the middle looks just as bad as the left one [just thicker, too]. So you see this is not working right.
One idea that I had, and apparently others too, was to make the primary color for the bottom layer transparent. While that sounds reasonable, it doesn't really work either, because the inner edge of the outline is still sharp. So again it will depend on colors used how that's gonna look. Here's an example:

You can see on the lighter colors it looks ok [because there's a light color behind them], while on the darker ones there's a thin white line between the primary and outline. The blur on the top layer makes partial transparency just before the outline, and the bottom layer is fully transparent for the primary color, so you can see a bit of whatever the background color is. If the bg happens to be similar to your primary color, it may look ok. But it's not something you can rely on.

So the final trick that makes it look good is to make the primary color of the bottom layer the same as the outline. You can see the result on the right part of the Touch and Click pictures, or on these two signs here:
While it may seem like a bother to make 2 layers for almost every sign, it's not really that much effort. Especially since most of you reading this probably don't have more than 20 signs per episode most of the time. I've worked on Maria Holic and Acchi Kocchi [in case you can't tell], which means about 80 signs per episode and I make 2 layers for anything that has border.

Here's the routine to do it:
1. type the needed blur and border to your line
2. use eyedropper to select primary and outline color
   ...that's what you'd do anyway, now the layers...
3. duplicate the line [I use just ctrl+C/ctrl+V since it's probably the fastest]
4. change the top line to layer 1 and rewrite border to 0; hit Enter to get to the second line
5. double click on the tag for outline color, ctrl+C, double click on tag for primary color, ctrl+V

In other words, once you have 2 layers, you change one to layer 1 and set \bord0, and in the other one you copy the color from \3c to \c. It's pretty fast.

But in case you're really lazy, I've got good news. The good guys over at EveTaku made a script for this and shared it, so you can get it [here](#).

I've done some debugging with lyger and the script now works really well and is a big help when you have 50+ signs per episode.

The main thing you need to know when using it is to type "bord" in the actor field. That tells the script which lines it should be used on. The script now works even if there are no colors or border set in the line, and works pretty well even with \c.

When it does NOT work is either if you have no border set in the line OR in the style, or when you use \xbord \ybord.

Currently it's buggy in "s" mode when you have alpha tags in your line, but that should be fixed soon.

Read the instructions at the top of the script to get the details about how it works. There are 3 modes currently, so check those.

Default blur to be added is set to \blur0.6 but you can change that in the script to whatever you want [if you have a \blur tag in your line, it uses that].

Another thing I do with layers is actually for signs that don't have a border.

Sometimes you have signs that have this vague, hazy, blurry surrounding, like in this picture:
This is how you’d normally typeset it, and I’m sure you can see the difference. This is a regular blur of about 0.6. If you use more blur, the letters will become unreadable and won’t look like the original at all. If you use a border and blur it a lot, it will be all kinds of messed up and look even worse. So we need two layers again. However, I use both layers without border. For the bottom layer, we need something in the range of \blur1 - \blur3. With a border you’d have problems... If you use \blur3 with \bord1 or less, you’ll get a sharp edge between primary and outline color. Smoothness gone. If you use \blur3 with \bord2 or more, it becomes unreadable because it makes the letters too thick. The solution is to not use border, and use \blur3 for the bottom layer, and \blur0.6-0.8 or so for the top. This basically gives you a double blur and looks like this:

My dream
is to become
a wonderful groom.
I will take good care of
my bride and make her happy.
I will want to become a public servant
and...
At first glance it may not look like much of a difference, but if you switch between the views [commenting the bottom layer], you can see it clearly. Again, how much better this looks will depend on the colors used, the background etc.

Here's another example:

We successfully Ambushed! Dona Dona Dona Dona Dona...
With the same color as the top layer it will usually look too thick. So you just make the color brighter/darker till you get the effect you need. You could also do this using the alpha tag. With the eyedropper tool changing color may be faster but in some cases alpha might look better. For the color you usually only need to change brightness, but sometimes the outline has a different hue as well.

Here's a more complex example with 3 layers. 2 for blurring the primary and outline, and 1 to add that soft haze around.

When you just look at this, you'll barely notice the 3rd layer. But when it's not there, you'll clearly notice that it's missing and the typeset will stand out. Good typesetting is more about the viewer not noticing something rather than noticing.

Another example:
And some more examples of using layers...
Typical case of 2 borders. You can make this blend in really well... if you have 3 layers, all with blur.

3 layers...
Top layer - shadow, bottom layer - outline.
This one... well... let me just show you. Layers top to bottom:

Kinda hard to explain this, but aside from multiple layers with multiple colors [red, almost black, almost white] you need different effects in different parts. You need more light on the "Extin," "Fire" needs to be much darker, different shadow colors, different shades of red around the letters, different Fax every few letters, varying transparency etc. And the whole thing is moving.

Yep, took about half an hour. If an episode only has like 5-10 signs, I play with them a bit more.

One more thing layers are used for - to mask the original sign and typeset over it. More on that in the next chapter.
So what remains is clips, animation, drawing mode, and using all the things together.

\clip

The clip tools are under the rotation and scaling tools in Aegisub. In principle they are simple. You have a sign and you want only part of it to be visible. So you use the basic clip tool and draw a rectangle over the area you want visible. You'll get something like \clip(54,25,380,110) in the tags. That's the coordinates of the visible area. Rather than this part being visible the idea is the other part not being visible, so it doesn't matter if you expand it to empty areas.

It can look something like this:

If it's a pixel off, you can either drag the orange dots or type in the tag. Typing without the tool selected may be better as the red lines won't be in the way. Obviously, a rectangle won't always do so you have the other tool that lets you draw a more complex shape.

There's also \iclip, which does the opposite - selects the area that will not be visible. No special tool for that so just add the i & adjust coordinates by typing. \iclip has more compatibility so I use that one wherever possible.

That's the basics of using clips, now for the drawing mode. You should already know how it works from ASS Tags.htm.

Drawing is useful when you need to cover some area with solid color and put a sign over that. I have briefly described that in the Positioning Signs section. I've never used any complicated shapes with this, in fact, only the rectangle. And instead of adjusting the coordinates for size, I've found it's much more convenient to use the basic version \m 0 0 100 0 100 100 0 100 that I copypaste from somewhere and adjust size with \fscx \fscy. It can also be rotated etc. like regular text so that gives you some variability of shape.

If I need a circle, I'll use a font with symbols. If I needed a static complex shape, I might use the rectangle together with the vectorial clip.

You can use ASSDraw in Aegisub to draw complex shapes, but you're on your own there, since I never use it.

Normally I use the drawing mode only for masking. Using the basic rectangle with \fscy i can usually get what I need.

Here's what you can do with it, if you feel like spending 5 hours on 1 frame:
Some colors of the masks are off because back then I didn't know about the issues with colorspaces and used ffmpeg in Aegisub 2.1.8 or 2.1.9. If you're using those versions, useAVISynth to load the video. If you're using Aegisub 3.0, use the BT.601 colorspace (which I think is on by default). In case it wasn't clear to someone, all the books had Japanese titles, of course...

So it really was 5 hours of pretty tedious work. I don't recommend that you ever try that. Each book has one typeset for the title with matching color and size, and a mask in the color of the book to hide the jp title. Sometimes there are additional ones for the numbers. Here's what it looks like in working mode. I think it's almost 200 lines.
OK, but back to a bit more sane things...

If you need a rectangle with round edges, or even a circle, you can still do it with the basic square. For rounded edges use border with a value as high as you need to get the right shape. \bord20 or \bord30 may be useful values. Of course you need the exactly same color for \c and \3c.

To get a circle you do the same but scale the original square down to 1 pixel. You can actually use this with a regular font. For example if you use a period with \bord50, you get a pretty good circle. You can use the letter O for an ellipse or whatever else gives you a shape you need. Just match the primary and outline color and it works.

Speaking of that, sometimes you need a mask with a slight gradient. Well, you might need a strong gradient but then you'd have to use an actual gradient and have hundreds of lines... But for a mild one, you can actually use some symbols from a font with large border.

For example in one Nise ep I had this sign:

```
Doggy Wheel
```

The background on the left is darker than on the right. Or maybe you could say the left is more orange, right is more yellow.
So a mask in one color didn't work, because it was always too visible on one end. And you can only have one color for the drawing mode. So what I did was use 333333333333 with \bord10 as the mask and changed color every few letters. I mean numbers. You can use OOOO or 8888 if you need a roundish mask, or use IIII or |||| if the range of colors is larger.

Of course for each section the outline color must match the primary. But to make it work you need one more thing.

That brings us to the last part about masks... **blurring the mask.**

While I start with \blur0.5 on all signs, I put \blur1 on the masks, and more if needed/possible. The reason is that more blur helps it blend better. So if there's enough space around, you can blur it a lot, like \blur5 or more, and then even if the sign has a slight gradient, you may get away with just one color, because with \blur5 you always have 5 pixels of fade.

(Actually this doesn't really relate to pixels but you get the idea.)

So back to this sign. We have those 333s changing color. For that to work you need that blur so that the different shades can blend into each other smoothly. I used \blur3 here. Couldn't afford more, because it would either start showing the kanji under it, or grow outside of the orange area. If you look hard, you may still find some barely visible discrepancies, but basically here you have a mask with a gradient.

For reference the colors are \#3D8FE9 on the left and \#4094EF on the right.
Now for the most fun part...

This is the tag with which you can do almost anything..... and make everyone’s player lag.

As a demonstration you can try this:

Dialogue:
0:00:00.00,0:00:06.00,Default,,0000,0000,0000,,{\an5\q2\fs40\b1\bord1\blur0.1\shad0.1\1a&HFA\4aHF0\t(0,3000,3,\fs75\bord4\xbord10\shad22\blur1\1c&H00FFA9&\3c&H9B2664&\4c&H0C1A4C8&\4a&90\1a&H00\frz150\fsp15\frz15)}Unlimited
Eyecancer Works

This will change font size, border size, shadow distance, blur, all colors, transparency, font scaling, font spacing and rotation. Oh and CPU usage.

For even more CPU usage, add movement, `\clip, the other rotations and `\blur15.

So this gives you the idea of how you can change the basic properties. Use your imagination to figure out how far the options go.

Let’s try something more practical though. Like text appearing bit by bit.

Type some text and place it somewhere. Now use the clip tool to make only the first letter visible.

Let’s say you get `\clip(50,150,100,250). Now add `\t, use the same clip in the `\t tag but change the second X coordinate so something after the last letter.

If the text ends at 400, you’ll use `\clip(50,150,100,250)`(\clip(50,150,400,250)). This will be showing static text gradually from the first letter.

See how it works out and adjust coordinates as needed if something’s off.

If you need the text to appear in the first 500ms and stay on screen, use `\(0,500,\clip.....`.

Something similar would be text that moves into a visible area, though here you don’t actually need `\t.

Let’s say a person is standing in the picture, text is generated behind his/her back, no pun intended, and the text comes out on the right. So what you do is use `\move to make the text move from left to right, and you’ll use `\clip to make sure the text is not visible behind that person. You’ll get a sequence like this:
You'll have to use the vectorial clip for this, to follow the hairline.
You could also expand the clip to the other side of the person and just make the text scroll behind her...
...as long as she isn't moving. If she is and you still wanna do this, change \move to \pos & go frame by frame.
If after a few hours of that you feel like screaming "Zetsubou shita!" no one will blame you.

So now you know how to make text pop up from behind something, whether vertically or horizontally.

Another example where you can combine \move and \V is when text is growing larger.
You know the trailer kind of stuff where a line appears and seems to get closer, then a few images and another line.
You'll use \t(\fs) to make the sign 'grow,' and \move to make up for any inconsistencies that may arise.
If the alignment is \an2 then the sign will only expand upward, \an5 will make it expand to all sides,
but if you're placing this above a jo sign that's already expanding, you'll need to \move up a bit.
otherwise the expansion of both signs may bring them too close together or even overlap.

This kind of signs may also use other effects, like the line appears and then slowly gets blurry,
or the letters move apart from each other - \fsp.

For illustration, try these things out to get the idea of what you can do (use 720p video AND script resolution):

Dialogue: 0:00:00.00,0:00:05.00,Default,,0000,0000,0000,,{\pos(300,300)\bord0\frx0\fry90\t(0,2000,2,\fry0)\org(20,300)}What is this I don't even...

Dialogue: 0:00:05.00,0:00:10.00,Default,,0000,0000,0000,,{\an5\fad(1500,0)\move(155,87,1040,670,0,1500)\t(0,1500,\frz-1080)}I still don't...

Dialogue: 0:00:10.00,0:00:15.00,Default,,0000,0000,0000,,{\move(400,200,800,200,0,3500)\t(0,4000,\fry720)}What Now?

Dialogue: 0:00:15.00,0:00:20.00,Default,,0000,0000,0000,,{\move(1000,450,300,200)\t(\fs120\bord8)\b1\clip(600,85,860,680)\frx14\fry24\frz10}That's enough!

Dialogue: 0:00:20.00,0:00:25.00,Default,,0000,0000,0000,,{\b1\org(640,50)\fax1\frz-60\t(\frz60\fax-1)\move(640,630,680,260)\clip(240,85,860,680)\b2}Or is it?!

That's about all I can think of right now, the rest is up to your imagination.
Remember though that overusing this will cause lag, so make any tags that you don't really need
and don't use too high values of the really laggy things like blur or all rotations at the same time.
If there's anything specific that I haven't mentioned anywhere, let me know.

« Back to Typesetting Main
Using Mocha to track signs for Aegisub

by herkz

Part 1 - Things you need to install

1.) Quicktime or Quicktime Lite
2.) Mocha for After Effects. As far as I know any recent version will work. I'm using 1.2.2.
3.) Mocha scripts for aegisub. Place them in \Aegisub\automation\autoload\. [Note: This should be up to date.]
   For the aegisub-motion.lua you will need to edit line 51 and specify the path to your 8bit x264.exe.
4.) x264 8bit, preferably from x264.nl since it will definitely work.

Part 2 - Creating the sign in Aegisub

The first task it obviously to style the sign to match the Japanese sign and position it where the sign is on the first frame. Also, the sign must be timed to the entire duration of what you want to track. This means that if a sign goes behind a character or something then split it and time until the very last frame it can be seen. Also note that it must be \an5.
In the example I'm using, it looks like this.

![Sign Example](image)

The sign is not perfect but that's another issue entirely. That's all you need to do for this section.

Part 3 - Creating the video clip

Thankfully, the lua script has a built-in way to create the video clip you want for mocha without you having to do any work. Just select the line and go to Automation->Cut scene for mocha.

![Lua Script](image)

After selecting that, this box will pop up.

![Dialogue Box](image)

Assuming it all went well, x264 should run and the created clip so be in the folder you specified. If it's not, you probably did not set the path to your x264.exe correctly.

![Folder](image)

Here is the clip that is created which you can download and use to follow along in mocha for the next section.

Part 4 - Importing the clip into Mocha

First thing you'll want to do is open Mocha. You can just ignore the guide thing if it pops up.
Next, you'll want to create a new Mocha project using the video file you just created.

![Mocha Project](image)

After this, go to the clip to import section and browse to the file and select it.

![Selecting Clip](image)

Hit next twice, and then on the last page of the new project wizard set the FPS to 23.976. Apparently this makes no difference but I'm too lazy to test it and I know this works.

![FPS Setting](image)

Hit finish and wait for it to load in. The progress bar in the top-right will show the progress but for small clips like this one it should take almost no time.
Part 5 - Selecting the area of the sign you would like to track

In the case of this sign, you can actually track the sign (or a portion of it) itself. In other cases where it goes partially behind a person or something you may be able to track an object that follows the same movement but is not obscured. Also note that you do not need to track the exact spot where you have the sign placed, just anything on screen that follows the same motion. To do this, select the Create X-Spline Layer Tool at the top of the screen.

Next, you'll want to select the area to track. If you download the clip and look at it you can see that the entire sign moves together so I just picked a section at the top of it. After selecting the x-spline tool, I made a box around the area I wanted to track.

Since the sign is very simple and does not rotate or change size, it doesn't need to be any more complicated than that. However, if it does do that you may need to select a very specific area to make it work.

Part 6 - Mocha settings

In the area below the video are some settings that you'll probably need to change to make it track correctly.

This is what it looks like by default. Moving from left to right, the first section we care about is Min % Pixels Used. Normally, 90 is a good value for this but in some cases you may need 95 when the area you're tracking has a lot of similar colors nearby or other parts of the sign look almost the same. You may need less (such as 80%) in cases where the sign changes in some way or there is motion blur or even blocking. [Note: Right on my first try the tracking to the 2nd frame went completely off, because the reference area was fading in (and there was nothing else to go by). Switch from Luminance to Auto Channel in such a case. -unanimated]
Next, the check boxes for Translation, Scale, Rotation and Shear. Translation will always be checked. Scale is exactly what it sounds like. You will want to use this if the sign gets bigger or smaller while it moves. Rotation is also what it sounds like, use this if a sign rotates while moving. Note that rotation and scaling are a lot harder to track than just translation so you may need to make the tracking area more specific and/or change the settings in this section.
After this, you'll want to specify how many pixels around the area you want to look to track it into the next frame. In the clip we're using, the sign barely moves horizontally and only moves a bit vertically so unchecking the auto boxes next to each and putting 10 for horizontal and 100 for vertical will probably work. The angle and zoom boxes are probably for the rotation and scale tracking but I've never had to use them. They seem pretty straightforward, however.

Part 7 - Actually tracking the sign

Even though your settings may not be perfect, you'll have to actually start tracking the sign to see if it works. To start this, press the Track to Next Frame button.

You should see the video advance one frame and the tracking area should move assuming it can find anything that matches.

In this case, it tracked it correctly. You may want to advance one frame at a time for a few frames to make sure it's working. If it is hit the button to the right which will make it automatically track to the end.
If Mocha is not tracking it correctly, you may want to change the values to either increase the area it searches or to even decrease depending on what went wrong.

Part 8 - Exporting data to Aegisub and applying it to the sign

Assuming you had no problems actually tracking the sign, you'll want to apply the motion data to the sign in Aegisub. To do this you'll want to click the Export Tracking Data... button in the Parameters section.
Click Copy to Clipboard and your work in Mocha is done. Next, go back to Aegisub and select the line in question. Go to Automation->Apply Motion Data.

Click inside the box and hit ctrl+v to paste the data.

Next, you'll want to uncheck the boxes so it only applies the relevant tracking. In this case, all you want is Position.

Hit Go and then you're done.

[Note: If you experience problems with this, read Part 11 below.]

Part 9 - Fixing the sign

While the sign may be tracked perfectly, you may have to fix something after you apply the motion data. For example, you can use the pos_shift.lua I included to shift all the frames however much you need. You may also have to individually clip the frames if it goes behind a person or something but that is outside the scope of this guide.

Conclusion

Mocha is a very useful tool to track non-linear panning or jitter. It works exceptionally well in this case and is very easy to use. However, it is a lot harder to use on signs that change size or even change shape. If that happens you can try to use Mocha but you might not want to waste forever attempting to get it to track the sign perfectly when you're probably better off doing it by hand.

Part 10 - Encoding without the Aegisub script

As it often happens, I tried this thing out and ran into quite a few problems. Starting with encoding.

Basically that Aegisub-Motion script didn't work for me at all, both for encoding and for importing the mocha data.

So here's another way to encode:

Create mocha.bat with this text in it:

```
x264 --profile baseline --level 1.0 --crf 18 --fps 24000/1001 --seek %2 --frames %3 -o %1_%2.mp4 %1
```

CRF can be anything, FPS I had to add because the first video I tried happened to have variable frame rate and mocha wouldn't load it. [This is for 23.976, change if your video has a different framerate.] I haven't tested the settings extensively but this worked. You will then open cmd.exe or whatever you use and type a command like "mocha filename.mkv startframe

More specifically it may look like this "mocha another06_premux.mkv 22480 200".

This will start encoding at frame 22480 and encode 200 frames from another06_premux.mkv. There's no command for endframe in x264 options (afaik) so you have to use a number of frames you wanna encode. You can either do the math from the script or, screw that, just encode a bit more and you'll set the end precisely in mocha.

Obviously you need the mocha.bat, x264.exe [8-bit] and the video in the same folder. Once you set it up, it works fast.

When you load it in mocha, you'll grab the red end marker you see in this picture, and drag it back to the last frame your sign appears on.
This way the tracking will stop on that frame.

**Part 11 - Converting mocha data for Aegisub**

The other problem with the script not working was that I had to use another way to get the data to Aegisub. This is actually pretty easy. You can do it through this website: Taiga

Paste tracking data, set the start frame, change the style name to the one you’re using for the sign, and input text for your line. Then check what you want to track - position, rotation, scaling - and hit Send. Then you just copypaste the generated lines to aegisub.

If the position is off, you can either use the X/Y offset, or - imo much more convenient - use the Position Shifter script in Aegisub (which you downloaded along with the other one). This script is quite handy because you see right away how well it worked, and you can use it repeatedly for additional shifting (of course you need all lines selected). As a sidenote, this script is also useful when shifting a sign that has several layers.

Update: I finally got the script working for converting the mocha data. Here's where the problem was:

**Export Tracking Data...**

<table>
<thead>
<tr>
<th>Frame</th>
<th>X pixels</th>
<th>Y pixels</th>
<th>2 pixels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>285.5</td>
<td>143.5</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>292.994</td>
<td>141.495</td>
<td>0</td>
</tr>
</tbody>
</table>

You need to select the "After Effects Transform Data" from the Export list. While the Taiga website works with any of these options, the script is only designed to work with this one. Herz has an old mocha version that only has 2 options and this one is default so he never had this problem. I've seen a screenshot from a newer version than mine which had like 20 options there. So be sure to select the right one.

**Part 12 - Scaling**

The first sign I tried with mocha was moving AND getting smaller, which is where I ran into problems again. The sign I was trying to track started like this:
Right there you see an example of how it didn't work. As the rectangle is getting smaller while moving down, the top of it moves a larger distance than the bottom. I tried tracking various areas till I figured out how it works, for example I tracked the whole rectangle, and this was the result.

Apparently with scaling your sign should be in the middle of the tracked area.
In this case what I used and finally worked looked like this:
Incidently I thought at first that I should set the points at the edge of a dark/bright area, but it actually had more of a tendency to slip away than like this. Might have been a coincidence but at any rate, this worked prefectly well.

Note: With the script you always have \an5 but with Taiga you can have any \an. What you need to have in the center of the tracked area is not the sign itself but that square that's at the top of the sign with \an8 but at the bottom with \an2. This would play an even bigger role with \an values 1, 3, 4, 6, 7 and 9.

Another thing worth noting about scaling is that vsfilter can't handle decimal numbers for \fscx \fscy, so \fscx100.99 is handled as \fscx100. This results in visible jumps in size between two lines with \fscx100.99 and \fscx101.

The disadvantage of the Taiga website is that it always starts with \fscx100\fscy100 on the first line, in other words you can't start with \fscx200 or any other value. The script is much better for scaling, because it doesn't have this limitation.

So what you need to do to avoid the jumps in size is to make \fs smaller and \fscx\fscy larger. For example instead of \fs50 and no scaling you'll make \fs5 and \fscx1000\fscy1000. Then instead of jumps from \fscx100 to 101 you'll have \fscx1000->1010 with 10 steps in between that vsfilter will be able to handle, so the transform will be much smoother.

Part 13 - What if stuff isn't exactly working right...

There are cases when mocha just fails and it's easier to do things by hand. Mocha is really good at tracking slow, fluent movement, but it has serious problems with the typical anime stuff where 3 frames are the same and then stuff jumps somewhere 200 pixels off, especially if scaling/rotation changes as well. So what then?

There are two things in mocha that seemed to help a little with this. One is switching from Luminance to Auto Channel [though whether that helps or not will be pretty random], the other is changing the Search Area from Auto to 200x200 or 300x300, when the tracked area makes bigger jumps. But there are times when none of that helps and the motion is so unpredictable, that mocha just can't seem to make sense of it... like that Coffee can in Nise 7. There was also a sign in Another that took Daiz an hour to do with mocha and drove him crazy in the process, while I did it by hand and it probably took me less than half an hour. So mocha is not necessarily always the best solution.

It is, however, pretty damn good in most cases when you only need to track position. So a few tips about that...

Let's say you have these letters gliding around:
You can just set 4 points on one letter and see if that works. If not, like if something is interfering, you can draw a more precise shape that will give you more points to track. If it still tends to wander off after a number of frames, a few things will help you fix that more easily.

To see clearly how well the tracking's going, use Zoom and Stabilize. Zoom in on what you wanna track as much as you can, using Z and X keys for zooming and moving the screen. Then you can draw a precise outline if you want, though usually something a lot more simple will do.
Then click the Stabilize button [may look different depending on your mocha version]:

This will keep the tracked area in the same place on the screen instead of it jumping around, so on each frame you can clearly see whether your control points are still in place, or slowly drifting away.

If they're drifting away and it's happening slowly and gradually, not in jumps, you can let them do that for 10 or more frames, then stop the tracking and fix the position. You can move the whole tracking shape by pressing Q and dragging the shape back where it should be. Any frame where you make manual changes becomes a keyframe. In this case that means that this frame is what you did manually and won't be changed by mocha. For simplicity let's say you start tracking, stuff is drifting away, and you stop at frame 10 and fix it. Now you have 2 keyframes - the one you just made and the first frame, where you drew the shape. Mocha will now automatically recalculate positions for all the frames in between. So if your control points moved 10 pixels off and you put them back on frame 10, mocha will move them by 9 pixels on frame 9, 8 pixels on frame 8 etc. If they wandered off gradually, this will pretty much fix the whole thing. Then you can keep tracking and do the same if it happens again.

If you're tracking only Translation, then all points should move the same. If you have Scaling checked, then any single point may wander off on its own, so I recommend to only check Translation if you're only tracking position and don't need scaling.

It gets a bit more complicated if the change doesn't happen gradually but the points jump off suddenly on one specific frame. This means the previous frame was still correct, so if you fix the last one, mocha “fixes” all the previous ones back to the last keyframe... but as they were correct, they will now be wrong. So what you need is to make another keyframe on the one just before it went wrong. Go that one frame back, and move something. You basically want it to stay the same, so you can move 1 pixel right, then 1 pixel left. It stays the same, but a keyframe is created. Then go to the frame after, where it went off, and fix that one.

In the typical “2-3 frames the same, then jump” jpanimation this can happen a lot. Often to the point that you may need to fix the position on almost each of the frames it jumps. It might be easier to just do stuff by hand in Aegisub, but sometimes it's actually easier to track it in mocha, even if you're pretty much tracking it manually. You may have to 'fix' almost every frame, or even not use the actual tracking, but just move to next frame and adjust points manually, but even that can be more convenient than tracking it in Aegisub. If there's also scaling and rotation, adjusting control points on every frame in mocha will probably be much less effort than doing all of that in Aegisub, and the end result will probably look much better.
So even manual tracking in mocha can be useful.
Typesetting: Fonts

Seeing from the results produced by typesetting apprentices, choosing fonts seems to be where they tend to fail. The main problem being that they don't really have any fonts aside from whatever is installed by default. So first you need to get at least some small collection of useful fonts.

You can get those from various places. Obviously there are websites with fonts. You can also extract fonts from decently typeset fansub releases, which is not necessarily as dumb as it sounds, since you'll easily get to a lot of fonts that are actually suitable for anime typesetting. Or you can do what I do - download large font packs from torrents, go through thousands of fonts, delete all the useless ones (yeah, about 80%) and sort the useful ones so that you know what you have and where. Obviously this takes the most time, many hours, but once you get through that, you'll have much easier time finding what you need when you're typesetting. In other words, takes time at first, but saves you time later. If you need a specific kind of font and you already have 300 fonts installed that you have selected as good and suitable, it'll be easy to find one quickly. If you have to go to a website and try looking for something that would work searching by keywords, it might take long and produce poor results.

You can certainly typeset with 20 fonts and get away with it. You will certainly get better results with 400 fonts to choose from. So it depends on what you're aiming for and how dedicated you actually are to this.

Before we get to what to use, let me make a few comments on what NOT to use.

- **Do not use 10 MB fonts!**
  It's stupid to increase a 200 MB mkv's size by 10 MB with just a font. Mainly for the reason that just about any 10 MB font can easily be replaced with a 100 KB one. 10 MB fonts are only justified for kanji. My general rule is to not use any fonts over 1 MB. Even fancy decorative fonts are mostly under 1 MB. Larger fonts are simply bloated with crap you don't need. Not that 2 MB would really be a problem, but just get used to checking the size to make sure you don't pick those 12 MB ones for no good reason.

Which leads to another point...

- **Avoid system fonts, fonts starting with @, MS, Adobe etc. fonts.**
  Not that they're all bad but those often tend to be the large ones and there are always plenty of similar fonts with sane filesizes. Aegisub has those @ fonts at the top of the list so beginners will choose them 'cause they're first. Just learn to skip those every time you're choosing a font. There are no "good" ones among them anyway, trust me. They're only useful if you need kanji. Even if they happen to "fit" what you need, you can always find a similar one that isn't bloated.

- **Avoid notoriously known fonts like Arial, Times New Roman, ComicSans etc.**
  If you use ComicSans, you will break rizon servers because they will get flooded with >ComicSans messages. Times New Roman might work sometimes, but it's obviously a severely overused font and you can always find other ones of that kind. As for Arial, pretty much no Japanese sign is so ugly that you could imitate it with Arial.

- **Basic Serif & Sans Serif fonts...** [if you don't know what that means, look it up]
  These are not suitable for most signs. Serif fonts may be useful for titles, as seen in the basics chapter. Basic Sans Serif fonts may be useful for cellphone/e-mail messages, or signs that clearly have no decorative elements whatsoever, like the Principal's Office sign here:

  ![Principal's Office Sign](image)

  You will, however, need something thicker than Arial [even when bolded] for this, usually ones with Black or Blk in the name. For most signs you'll want to avoid these basic fonts, as it will look more like you're "putting text on screen," rather than typesetting. The typesetter's job is to make the signs look good. If we wanted to just put text on screen, we'd do it ourselves instead of hiring you.

So what WILL you actually need?
Some better looking [Sans]Serif fonts
That means ones that aren't as plain and ugly as Arial and TNR.

LOTS of handwriting fonts
Handwriting is all over anime so the more of these you'll have, the better.

Some brush/calligraphy fonts
Kanji works great with brushes and the Japanese know it.
If you want the typesets for such signs to look really good, you'll need some nice fonts of this kind.

Round/rounded fonts
Some with the whole letters being round, some where just the ends are rounded. [Note: Arial Rounded MT Bold looks like shit]

Square fonts
...when they use square-ish kanji, obviously.

Chalk/pencil fonts
Where would anime be without signs on school blackboards. Better have Eraser Dust and some others ready.

Fonts with eroded outline
Meaning ones where the outline isn't clean but kind of jagged and stuff.

Some thick/thin/wide/narrow ones
This might as well apply to each category separately. Using \fscx150 doesn't exactly produce the same results as having an actually "wide" font. Sometimes extremes are needed to either match the original or to fit the sign where you need it.

All kinds of deformed and distorted fonts
Not needed most of the time, but if you want to do a really good job on a SHAFT show, it'll be useful to have all kinds of things around.
Blood splatter, ripple effect, various patterns and textures, lightning and wobbly shapes.
No need for beginners but it might still be good to have a few of those around.

Heavy cartoonish fonts
At least a few of those, usually for some titles and SHAFT madness.

Decorative fonts
Some script fonts and whatever fancy stuff you can find. It is kind of hard to predict what you will need, but good to have a few lying around.

Digital looking fonts, ones made out of dots, pixelated ones, typewriter fonts etc.

That about covers the basics. Handwriting is a must, other than that you should have at least 2-3 of each of the other categories.
I usually operate with 350-400 fonts installed, though I have at least 10000 at my disposal.

So that's what you need. Some image examples will follow below.

The next step is what to use when. I'd think that would be pretty easy but... I dunno, I've seen enough fails to prove me wrong.
So let's start with an example where I let some guys typeset some Nichijou and we used this Shinonome Laboratory sign to experiment with fonts.

The first attempt looked like this.
What should be obvious is that the JP sign looks handwritten rather than printed, the outline is kind of free rather than precise,
and it has an overlay pattern. Not that you can easily imitate that pattern but it gives you an idea of the general look you should go for.
Which means this attempt fails quickly. Besides the font mismatch it is poorly positioned and the color doesn't match either.
Second attempt. Improvement in color and position, but not so much in font choice. It doesn't look like a plain typewriter font anymore, ok, but this is still too regular, mathematical, clean, and generally doesn't fit.

Third attempt [I think]. This has some eroded outline so it's not as clean as the previous ones, but clearly it's almost as fat as the average American. That's bad, by the way.

This was, I believe, the last attempt. Eroded outline, some overlay pattern, thickness matches... this passes.
I hear this was in the actual Commie release. It... doesn’t pass. Low budget typesetting edition, I guess.

The next few are my examples of fonts that could be used...

Oh yeah, I used caps because it seemed to fit better and never tried changing it for the other examples. While you will mostly get the script in capitalized lowercase, there’s really no reason why you couldn’t use caps for a sign like this. So, this works fine.

This font is squarish, but the thickness matches well enough and it’s kinda irregular so... works.
This is better. It has more space between letters which makes it look less out of place. Might actually be my favourite of these.

This was just a test to see how Eraser Dust would work. Nothing really great but better than those first attempts up there. Like, if your font collection is poor, this might be ok.

This one's pretty irregular and has lines all over the letters, but is a bit too wild. Still acceptable. In my opinion it's better to make the sign more interesting than more boring. Then again, that should have limits as well.
...just another font that works.

This is again going a bit beyond the original but it's much better than plain boring fonts.

This would be another of my favourites. It has pretty much all the properties of the original and isn't too crazy either.
This was actually the first attempt of another guy in my "TS class" and it's fucking awesome. Very unintrusive, maybe the best of all examples.

The larger your font collection is, the more you have to choose from and the higher chance of your final choice being really good. If you only have Arial, TNR, ComicSans and other basic stuff, this sign won't look too good.

This one's from another test. It's too plain and flat.
I just changed the font and added a little bit of shadow to make it more 'plastic'.

At a time like this, **IDIocy** can't be helped.

This doesn't look bad, though it lacks blur, but the red font doesn't correspond with the jp one much. [Also personally I'm a bit tired of chinacat.ttf - the other one]
If you have enough fonts, it can make a world of difference.
This red one, btw, is what I meant by ‘heavy cartoonish fonts.’ Stuff like that.

We've seen this next sign in the Positioning section, here are two random examples of fonts that would work with this.
You may argue that the original sign isn't really as fancy as the typesets, and you may be right, but I'd say...
I'd rather make the typeset look better than the original then make it look uglier.

This is something you'll definitely come across. A font that looks fairly plain but is rounded at the ends. This is chinacat again, but here it's just perfect. It's a lot more regular than most handwriting fonts, and here you can match the size and thickness of the letters to the original really well.
Children-style handwriting.

One of those chalk fonts. The pattern isn't that visible with small size but it's good enough.
Here on the sides you have one of the not-so Plain sans serif fonts.
For the middle sign, the choice of the right font is what will make it look like it belongs there.
It has two layers. Both the black and white are slightly blurred to make it look natural.
This is quite self-explanatory so nothing to say except... I think the editor made a mistake here!
Good thing it hasn't been released yet.

More to come, I guess... [+ the 'blending in' and 'examples' sections have more... examples]
Ultimately what you want to achieve is to make your typesets blend in. To make them look like they belong there. If possible to make them look like they were there in the first place. So that when somebody watches the episode, they don't think "oh, somebody put text here to tell me what this sign means." If possible, the viewer shouldn't even notice something was added. The typeset shouldn't stand out, being the first thing you notice because it looks out of place.

Making it blend in perfectly is not always possible, so sometimes you just need to make sure it doesn't look distractive/odd/ugly.

The way to achieve this is by combining all the things you've learned in the previous chapters. Choose a good font, find a reasonable position for the sign, make sure to get all the colors, borders and shadows right, align it correctly, use as much blur as needed to make it look natural, etc.

Sometimes there are several reasonable ways you can typeset a sign, so choosing the best one will make a difference too. [Sometimes that requires thinking outside the box a bit.]

For example this one...

You could try to squeeze the typeset somewhere around the jp letters, or put it outside the box, but that would pose obvious problems. The thing you can make use of here is that the box is a regular rectangle and the background is one solid color. Which means it will be extremely easy to just replace the sign without any interference.
I didn't even use drawing mode here, just 'opaque box' for border.

Here you need to pick the right font and match the size and thickness of the letters. [And obviously have no border/shadow.] At first glance you'll hardly notice anything was added here. Looking at it some more, I'd say it could use a little bit more blur, and a little bit of alpha or slightly darker color.
Here the challenge is aligning and positioning. Forget trying to squeeze it next to the jp or rotate it ~90 degrees [in relation to current orientation]. Just use a place where it comfortably fits and looks like it might be the title of the paper. Align correctly in both directions and add some blur to avoid jagged outline. Also make sure you’re not using pure black just ‘cause your style has it. Almost nothing in anime is pure black. Match colors precisely.

Use good font, match color, add blur. Now imagine Arial with some stupid white outline and no blur, like some derps would do.
Nothing much inventive here, just follow the basic guidelines and imitate the original sign.
Use a somewhat square-ish, thick font. There are 3 lines [in script], each of them has 2 layers.
Top layer has matching color [red-ish/blue] and a shadow [no border]. Match the shadow distance.
Match the transparency/color of the shadow, not just black "cuz it was there".
Bottom layer has white outline and another shadow, this one with a lot more transparency.
Since the whole trick here is to really just get the basics right, make sure you notice all the borders and shadows correctly.
I almost missed the second shadow here. Sometimes you'll need more than 2 layers to get it all done right.

The 4 corners... would be hard or pretty much impossible to match, since there are multiple effects, embossing, texture etc.
So I decided to kind of approximate the colors and at least make it look nice. Which means mainly using a nice font.
Add shadow for at least some sense of depth, and play with the shadow/border till it looks decent enough.
Since you can’t match this exactly, there would be plenty of variations of how you could do this.
IMO you're better off using some nice script font even if it doesn't quite match, than using TimesNR which might technically be closer but would look like shit.

As for the Flashback... the font is the easy part. More interesting is the shadow.
And even more interesting is that the sign was moving around earthquake style, changing the direction of the shadow on every frame.
So what I did was to time it frame by frame, use \xshad and \yshad on each frame to change the shadow direction,
and adjust \pos for each frame to follow the shaking movement of the jp sign. Good thing was it only took 20 frames.
[If you're learning, you're not required to follow the movement & shadow frenzy. Just saying it can be done and how.]

The ones on the sides obviously can't blend in perfectly. There's hardly any space for them anywhere else,
so the best you can do is to match everything as closely as possible. This isn't even as close as possible but it's good enough.
The other two can be done much better. Positioning is pretty obvious, so good font, thickness of letters etc., correct colors and a bit of blur.
The top one has even that background blur (you add very little border, like 0.1-0.2, a lot of blur [4-6], and adjust color or transparency till it looks good).
The bottom one doesn't have that because I was too lazy. Negative points for me.
Four typesets here. The Zoom would look much better with another, top layer without border/shadow and with some blur. However the whole sign was moving and increasing in size, which means \move and \t, so adding another layer and more blur might munch on the CPU too much so I left it like this, especially since there are 3 other signs in the picture.

The 'Math' doesn't look too great, but font is ok and it doesn't stand out too much, so it's good enough.

You could replace the letters on the yellow background with the 'Math,' but I don't like replacing signs if I can't replace ALL of them.

Having some kanji replaced with English while there are other kanji in the picture looks lame to me (though I wouldn't say it's 'wrong').

Third one is 'Mathematics Drill.' The big blue letter covering the Drill is moving away till it's not covering the word at all.
So I used \clip to remove what was needed from the Drill, and changed the \clip frame by frame. [Well, I was cheating, so each 2 frames.]

Fourth one is the Winning Lawsuit. Didn't really give me many options as to what to do with it.

As you can see, I used 4 different fonts here, trying to match the style, thickness, size etc. [as much as possible]

It should be clear that all of the signs use blur. The Lawsuit could use a bit more but then it was getting hard to read.
If you can't see the sign, it's blending in well.

I dunno, I just thought this was a cool idea...
It's a typeset for the white-on-pink sign at the top. Clearly there wasn't enough space there so...
I've done so many Kitano Tenmangu Shrines that I couldn't count them. Here's 3 in one picture. Aside from aligning & blurring, the middle one has some extra features in order to blend in. I tried doing it including the semi-hidden part, and it happened to work really well. The trick is pretty much this: Kitano Tenmangu Shrine. Btw nobody tells you it should go at the top of the shrine. You just know you're supposed to typeset the white kanji. So most people would try to put it somewhere around the kanji. Like I said, don't do that. Find a less retarded / more elegant solution.

This may look simple enough but... if you do just one layer...
...it looks like this. See the difference? So yeah, another layer, different color, a lot more blur.

On the right... First choose a font. Then add some \fry and place \org about a mile away to get the alignment you need. [OK, maybe not that far] That may take a while to get right. Adjust font size and position till it fits. Use \fax for fine tuning. Add blur, obviously. Then the colors...
The left side is brighter than the right. So I used 3 shades for each line. The whole thing looks like this:

```
0:02:54.02,0:02:56.07,names,Caption,0000,0000,0000,\{\an7\fs34\fax0.04\fscy110\bord0.5\blur0.8\fry18\org(839,950)\frz6.258\pos(800,-45)\alpha&H80\c&H464036&\}High Scho\l \N \a\l\p\h\a\H\7\5} Nat(\alpha&H\H\7\0)ional \W(\alpha&H\H\60) Ogura Hu(\alpha&H\H\7\5) nd(\alpha&H\H\7\0) red (\alpha&H\H\60) Poets \W(\alpha&H\H\80) Karuta (\alpha&H\H\75) Ch(\alpha&H\H\70) ampion(\alpha&H\H\60) sh(\alpha&H\H\55) ip
```
Omi Learning Center was even more interesting. Font, positioning and aligning is obvious. I don’t even remember but apparently \frz\frx\fry\fax. The background changes color/brightness a lot from left to right. That was the biggest challenge. Alpha probably helped with a bit of that. Most of it was done by changing shades for main + outline color for almost each letter. It also has both border and shadow. There’s \yshad on top of that, which actually created a bit of an effect that I didn’t even expect, where the top edge of the letters looks brighter. I’m not even sure why that happened but it was a nice bonus. Whole thing here:

So yeah, sometimes it takes a bit longer to make it look good.

Signs like this are awesome. They’re not moving so you don’t have to chase them across the screen, but you get to have fun with the details. So how do you imitate all the borders/shadows? 5 layers:

Layer 5 - just the green letters without border. Increase letter spacing to avoid too much overlapping of the letters.

Layer 4 - \yshad-3\yshad-3 with the light color.

Layer 3 - \yshad3 with the darker green.

Layer 2 - \bord3 with the same color as Layer 5 - to fill in the corners.

Layer 1 - \bord6.5 in dark grey and \shad5 in dark green.

...and of course blur on everything.
Another fun sign [Maria Holic is full of them].
The cool thing here is, that it's all done in 1 line. All you need is one \N, different \frz for each word, and move \org somewhere far. Additionally the words are moving back and forth every 2-3 frames, so I timed frame by frame and changed \pos by 1 pixel back and forth. While 1 pixel isn't much normally, the effect when you have \org somewhere far is pretty cool, especially with all those \frzs.
One hour of work. 39 lines. Just because I can. [Still not perfect though]
Original line in script was "Misakichou 3-3". I decided while I'm at it, I might as well do the rest.
Like almost everything I do these days, all signs are in 2 layers, to get blur on both the outline and primary color.
Split to make a line for each ~2 letters. Positioning, rotating, fax-ing. Takes a while to get it right [and the top one is still wrong].
For the top one I also had to change color for each letter [and outline] because the background darkens a lot from left to right.

« Back to Typesetting Main
Here I'll be posting some examples of typesets that I've found in various releases. Some of them not too bad but could easily be better, some of them pretty bad for no good reason. I'll be updating this page as I find new interesting things.

This is dickpants typesetting 101.
JP sign: large thick "serif" (not sure how to define that in kanji but should be close enough) font, no border, has shadow.
"Typeset:" small thin sans serif font, no shadow, fucking black border...
Question: Why?

I can't believe this was actually released. No matter how little you know about typesetting, you should be able to handle borders and shadows. Font size is pretty easy as well.

Takes 1 minute to fix, out of which 40 seconds will be looking for a good font...

How hard can this be? ^

Same here...

Might be good to use a font with dots, nuke that retarded border, add a little blur...

There you go. Viewers might as well think the studio used both japanese and english title.
Even if you don't have a font with dots, it would still be common sense to at least type `\texttt{\textbackslash bord0}`.

I don't even...

90 degrees rotation successful, yes, but that's about it. Well, I'll give credit for the font on the left, that works (but not like this). Other than that it's "Herp derp. Let's put some text over here... bam! Finished."

Left sign: Text is black, so keep it that way, and place it somewhere where it doesn't overlap with other things.

Right sign: If you have to choose between placing the TS a bit further from the sign with smaller font, and full retard mode, please don't choose full retard mode.

This is still all very easy.

Nuke (something that looks totally like) Arial, nuke border where it shouldn't be, don't use colors that aren't even on the screen, add a bit of blur. Oh and don't place typesets "over" the signs, duh. This "let's put it as close to the original sign as possible" strategy is pretty dumb.
Muru Muru tries harder and so does the typesetter. Too bad he still fails.
The colors kind of match, mostly, so that’s an improvement. Font is not Arial so that’s another. Aside from the one in the red box though, the font still sucks.
Using a very round font for squarish signs is not the brightest choice. The next obvious thing is the border. The jp signs have a very thick one so why use thin?
Probably the most awesome thing though... watch how the “Future Diary” casts a sharp bright shadow over dark things. Amazing, huh?
So, dear typesetting students, if you want a shadow that isn’t too dark, you don’t do it by choosing grey color.
You do it by increasing transparency. (

\textbf{Note:} Any opacity value will work. Use the \texttt{\textbackslash blur} tag.
So, pick better fonts, fix the borders and shadows and it looks a lot less fake.
This is still far from great, but it's far better than the one above and took only a few minutes to change.
The bottom sign could be much better, but since there are already 3 signs on the screen, I didn't want to add too many layers with blur, since it might lag.

Not bad, generally fits in but...
...font and one extra layer and you're much closer.
The middle layer has dark inner color and thin bright border and is positioned a bit up and left.
Bottom layer is just one color and \blur5.

Here you obviously have a problem with alignment and color doesn’t match.
This one's much better on both counts, but still has issues.
The alignment is still a bit off, but few people would notice.
Main problem is readability, because of the color, especially for 'Lamp'.
Let's explain one thing here... I'm sure the color was matched with eyedropper,
but that doesn't always work. The reason is difference in background brightness.
The typeset is on darker background than most of the jp sign.
The darker the background, the darker the font has to be.
You can check with eyedropper that the jp signs follow that pattern.
Otherwise visibility goes down when the brightness is similar for both,
even if it's a different color.

So if I fix the alignment and adjust the colors, it gets another notch better.
As it often is in such cases, the color changes a few times throughout the line,
because so does the background.
Here, have some Doki quality.
Apart from the crappy translation [no, I can't read moonrunes, but I'm told by translators this is like google translate],
this is typical Doki typesetting. They kinda know how to do it, but not really. They can use rotations, but do it wrong.
See chapter on aligning to learn how to do it right.
Doki can always be beaten by experts from Hadena. This group is a true legend. No one else can fuck up translating, editing, timing, typesetting and encoding [let’s not even mention QC here] with such magnificence. All of it apparently despite people from other groups trying to help them.

So what in the bloody hell is this?
- They decided to use a mask.
- Failed to match the outline of the sign.
- Failed to cover the bottom of the sign.
- Failed to use blur on it, making it jagged as a chainsaw.
- Used a bit of transparency, so that you can see the kanji underneath, for whatever unknown reason.
- Used a FUCKING SHADOW on the mask!
- Put text on it.
- Each word going in different direction.

I. Don’t. Even.
Hello. This is Hadena again. We can put text on screen, see?
What? What is blur? We don't heared about this. But sharper is better quality!
What, shadow? We can has no shadow? Oh. But. It look more proffessionull with shadow, no?
OK, anyway...

Here's some other derps. Clearly they don't have what it takes to be a legend like Hadena.
So they might as well try a bit harder and produce something decent maybe.
They could start by matching the color right.
I know most people wouldn't bother with 2 layers but... it looks so much better if you can blur the red as well.
Oh well...
Scary indeed! Beware of brazilian typesetters! [I dunno, just guessing...]
Same guys as previous sign. Maybe they should go for a legend after all. This is pretty... scary.
Seeing that, somehow I'm not worried about molesters at all. There's something more sinister lurking around.
Also the main font with purple shadow...
But guess what? Beware some more, because Hadena is back, motherfuckers! Typesets attacking you from unexpected angles, right about to drop a few child molesters on your head as they fly over you.

Honestly, the best group for this sign was HorribleSubs with \rm. I thought the idea of fansubs was to improve the quality of crunchyroll, not make it worse. But what do I know.

Here’s a bunch of groups doing the same sign:

![Image 1](image1)

I've been waiting for two hours now, what happened? Is something wrong? Please call me.

![Image 2](image2)

It's been two hours already, What's wrong? Did something happen? Please contact me.

This looks ok, though the color is a bit off.

This color is also off and it's missing blur on top of that.
Color is off. I think this was herkz, who likes to laugh at others for exactly this so feel free to laugh at him. Also it’s only like 1 pixel away from the jp, which is pretty dumb, since there’s plenty of space below.

Finally somebody got closer to the color, best so far.
Here the color is off again. I don't know what everyone's problem here is. Also seems to lack blur.

Yeah, I know what your question is. The answer is: asuka subs.
What can I say?

I've been waiting for two hours now.
What happened?
Is something wrong?
Please call me.

It's been two hours already, what's wrong? Did something happen?
Please respond.
Nope.
It's true that replacing the jo seems like a good idea here since nothing's in the way.
But first, this is not the kind of font you'd have on a cell phone.
And more importantly, if you can't match the color of the background, just find another job.

Yep.
Good enough, but could be better. The end should be leaning a lot more to the right, you can clearly see the edges of the mask, etc. You know, if you just put \texttt{\textbackslash blur2} on the mask, it'll do the trick in many, if not most, cases.

Uh-huh. Ok. You were saying you can typeset? I see. Where did you get that idea?
I don't even...

More to come...
A bunch of scripts that don't come with aegisub by default:

**Position Shifter**
Shifts `\pos`, `\move`, `\org` and clips for selected lines [one or more of those options].

**Motion**
Script for motion tracking with Mocha. This one is for Aegisub 3.0. **This one** works with 2.1.9 but you should use 3.0 unless you have some serious compatibility issues with it.

**Add Tags**
Lets you type tags to be added to all selected lines or lines with a specific style.

The following ones are simple modifications of Add Tags to save you some typing if you want just the one tag. They don't add anything to the functionality of Add Tags but can be handy for particular tags you need often.

- **Add Blur** - adds `\blur0.6` but lets you change the number before applying [you can change the 0.6 in the script]
- **Add Fade** - adds `\fad(0,0)` & lets you modify the numbers before applying
- **Add Alpha** - adds `\alpha&H00&` etc.
- **Add Italics** - obvious, might be useful to editors too
- **Add Border** - adds `{bord0` etc.

Downside is, if you only have a tag in the middle of a line, this will add the tags there, not at the beginning of the line. These are modifications of Add Edgeblur, adding the tags at the beginning of the lines, including `{` [eg `{\blur0.6}`]:

- **Add Blur** - `{\blur0.6}`
- **Add Fade** - `{\fad(0,0)}`
- **Add Alpha** - `{alpha&H00&}`
- **Add Italics** - `{i1}`
- **Add Border** - `{bord0}`

Downside is, you can't modify the value before applying [though you can change the default in the script]. You can use `ctrl+h` to replace stuff in multiple lines after using this, like `bord0` -> `bord3` or whatever. You could also use any of these to mass-add any other tags - just add whatever and `ctrl+h` to what you need... but most of the time the add_tags mods will be more useful. These are only if you need to force tags to the start of lines.

Somebody with script-writing skills could make this much better... I know shit about scripting so I just modified the tags. These are useful to me because I work with scripts with 100+ signs that end up having thousands of lines so any typing saved is welcome.

Note: Both of these 2 sets have the same names in aegi but if you keep the filenames, the 'add tags' modifications will be at the top and the 'add edgeblur' ones further down.

**Duplicate and Blur**
Awesome script that creates 2 layers and blurs both of them to avoid that sharp line between primary and outline color. If you think it's not working, it's because you didn't read the instructions [at the top of the script].

Basic thing: it doesn't just run on selected lines, you have to type "bord" in the actor field to mark the lines to be used. It has several variations of "bord" with different effects [like 2 borders]. Don't be lame and RTFM.

**Bezier**
Aligns text along a bezier curve.
Won't do shit if you don't read the instructions in the script so please...

If you have a useful script that's not listed here, give me.