Recommendations for designing projector files

Description

For designers this is our recommended layout features to include when creating projector files, based on feebdack from members of the Projectors for Sewing FB group. These design guidelines assume customers are using a traditional PDF reader software like Adobe Acrobat Reader to project patterns (after manually calibrating their projector). The new all-in-one automatic calibration and pdf projecting softwares, Pattern Projector, and Project & Cut, will also work with these files.

- All pieces complete (none split across pages), and unless necessary, all pieces on one page.
- But groups of pieces can be segregated on different pages if needed because overall page size will be over 200?x200? an Adobe issue causes some scale issues in many non-Adobe software (see more info below).
- All pieces in one line makes for easiest scrolling, as people don't have to hunt for pieces, they just keep scrolling for next piece. But if that will make file larger than 200? long, it's OK to have pieces next to each other, not just in one line.
- Layers are required. Being able to turn off sizes to just project the size(s) we need is key for projecting, otherwise it can be very hard to follow the line we want to cut. But all layers in "top level", no nesting of layers, because not all pdf readers can access nested layers.
- Avoid as much as possible separating sizes in different files or pages. We need all sizes layered and nested together, so we can blend sizes and turn on and off sizes we want. Nesting of sizes on the layout is needed, but do not use the nesting/sub-layers feature when creating layers (see above).
- It can be most helpful to users if pieces organized by view options, and pieces that go together near each other, such as sleeve and cuff. For simple patterns, starting with largest pieces and then moving to smallest pieces in order is helpful.
- All pieces with grainline in same direction is required. This saves us from shifting our fabric unnecessarily. As well all pieces in same up-down orientation, so people don't have to flip directional fabric when cutting. If folded pieces are included, all fold lines on same side, but preference is to have unfolded pieces as explained below.
- Large text (around 20 pts or more, can be outside pieces). Thicker lines (around 4pts) are preferred.
- Calibration grid layers, or very large test square. This is a good way for people to double check their accuracy (but they normally will have calibrated projector, so calibration layer on pattern is only for double check). It's OK to leave calibration layer off by default. Please include metric and imperial grids. An addition if possible, it's more user friendly, if there's a large box with thicker lines in the grid labelled with a measurement. For example 16×24" box, or 40x60cm box, which makes for easier check of accuracy than just a grid of squares.
- Large margins 50cm/20" around edge of artboard/page. These large margins are needed because of the restriction in Adobe reader of running out of scrolling room to move piece withing projection if piece is too close to edge of page. (But not extra space between pieces is needed.)
- But due to Adobe Acrobat limit of 200"x200" page size, and our need for large margins, a second page may be needed for patterns with large pieces. Please avoid individual pages larger than 200?x200". Adobe Illustrator adds a 10X scale compression to files that are over 200×200?, and

Adobe Reader knows about this and returns the scale to accurate. But other software does not always know about this compression, and then pattern opens as 10X smaller than accurate if any page is over 200?x200?.

- Being clear on Cut 2 vs Cut 2 Mirrored, in the cut instructions on the pieces. The printed pattern tradition of indicating Cut 2 and assuming pieces are cut on a folded piece of fabric doesn't work on projector. Cut 2 will make many think they should cut as two pieces on same side of single layer fabric, so won't automatically be mirrored. If pieces need to be mirrored, be clear in the cutting instructions. Or even better provide two mirrored pieces as explained below.
- Unfolded pieces with fold line in centre so users can choose to cut on one layer or on folded fabric. If unfolded pieces not provided, then at least put all fold lines on same side.
- Two mirrored pieces provided, so users don't have to flip their fabric for the second piece. These could be labelled "Left" and "Right" if applicable for instance, or "Sleeve" and "Mirrored Sleeve", and "Cut 1". Or text could be between the two pieces and not be different for each piece. In that case text could say "Sleeve, Cut 1 of each" or "Pockets, Cut 2 of each", for example.
- Drawn rectangles for all cuffs, bands, etc. as well as measurements provided.
- Attention paid to notches and other marks that they large enough to be visible on projector.
- Files should not be locked, as that adds more work for customers to make fitting adjustments digitally, and [does not prevent thieves from cicrumventing encryption, as explained here](). At a minimum, file should have no restriction on Annotions/commenting tools and measuring tools access.

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