Patent Drawing Primer

Drawings supplied by inventive clients should meet the following <u>minimum</u> requirements to make the most efficient use of everyone's time and resources.

Deliverables: (The four "C's")

1. **<u>Complete</u> drawings**: that show all claimed elements of the invention.[1]
2. **<u>Clean</u> drawings**: without measurements, text, lead lines, drawing frames, part numbers, or other obscuring information.[2]
3. **<u>Comprehensive</u> views**: all parts with least overlap (exploded isometric)
4. **<u>Crisp</u> details**: must retain legibility with repeated faxing, scanning & copying, while fitting within the margins of 8.5 x 11 inch sized paper.[3]

Physical Elements of Client Supplied Line Drawings:

☐ **Solid black <u>lines</u>**, **thick** enough to retain legibility, no axis or centerlines
☐ **<u>Text</u>** (if necessary) **<u>size</u>** at least **32 cm (1/8 inch)** in height when printed
☐ **<u>Shading</u>**, **gradients, large areas of solid black <u>not</u> allowed**
☐ **<u>Stippling</u>, hatching, contour lines** allowed where necessary.
☐ No circled reference numbers (**<u>no ref #s</u>** at all, as they will be added later)
☐ If **<u>common fasteners</u>** are used in production drawings, but they obscure elements of patent drawings, they may be **omitted** in all but one drawing.

Symbolic/Reference Elements of Client Supplied Graphs/Plots/Schematics:

☐ **<u>Plotlines & waveforms</u>** should be clearly **distinct** from gridlines and other plotlines. i.e. – use thicker lines, broken lines, etc. (but **no color**)
☐ **<u>Common symbols</u>** (electronic, hydraulic, conduits, etc) may be used, but with only **minimal text** references. (i.e. schematics)
☐ **<u>Flowcharts/Block</u>** diagrams OK, but **graphs legible and B&W only**.

Recommended File Types: (descending order of preference; vector graphic best)

1. **<u>EPS</u>** = Encapsulated PostScript (vector graphic) [use Save As…]
2. **<u>AI</u>** = Adobe Illustrator, version 10.0 (vector graphic)
3. **<u>DWG, DRW</u>** = AutoCAD version 14 (vector graphic format opens in AI)
4. **<u>PDF</u>** = only if drawings can be exported to vector graphic programs
5. **<u>TIFF</u>** = export highest resolution (each email < 9Mb or compress)
6. **<u>EASM</u>** = Solidworks eDrawings (creates bitmap drws = jagged lines)
7. **<u>DOC</u>** = Microsoft Word (graphics & graphs difficult to edit)

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[1] It is easier and cheaper for a client to initially edit out unneeded information with original software than for Inventive Solutions to clean up drawings later with Photoshop.
[2] Use separate drawings to identify parts or for notes on parts to help with patent.
[3] Use landscape orientation to maximize viewable area where appropriate.