

**Checklist / Audit**

- 1) Input from client.
  - a) Production Plan (schedule and volume)
  - b) Tooling Plan
  - c) Costed BOM
  - d) Quality Spec
  - e) Product Spec
  - f) Technical Spec
  - g) Client's Internal Roles and Responsibilities
  - h) Two products to use and take apart
  - i) Markets
  - j) CM Contract
- 2) Product
  - a) Mechanical
    - i) DFMA
    - ii) Critical Drawing Specs (do they exist?)
    - iii) Component Stack Up / tolerance (do they exist?)
    - iv) Mold cards
    - v) Deco
    - vi) Materials
  - b) Electrical
    - i) FMEA (does it exist?) – suggest for deeper dive
    - ii) Safety Analysis
    - iii) SMT vs. Through hole
  - c) Software
    - i) Ability to download new code
- 3) Quality
  - a) Temperature / Humidity
  - b) Transportation
  - c) Flammability
  - d) Aging
  - e) AQL Levels / Final Inspection
  - f) Specs – when is it good enough
  - g) Return modeling. Defective vs. Non Defective
  - h) Life testing
  - i) RMT
  - j) Variability
  - k) Functional Testing (how to test brain waves)
  - l) BIT
  - m) Batteries (if included)
  - n) Small parts
  - o) Abuse testing
  - p) “Stacia / Ruginis” testing
  - q) Regression testing for new changes.
  - r) Point person responsible for quality
  - s) Serial numbers and date code. How transmit? How label?

- t) Modularity / Maintainability
- u) Sampling – frequency and tests. Watch driving cost – just do what is important.
- v) Toxicity / heavy metals
- w) Paint Peel
- 4) Compliance
  - a) Prop 65
  - b) UL Compliance
  - c) CEC Low Power
  - d) FCC Part 15
  - e) REACH / SVHC – Supply Chain implications
  - f) RoHS
  - g) WEEE
  - h) Battery Directive (EU)
  - i) LiPoly / NiCAD legislation
  - j) Special Materials (fabric)
- 5) Supply Chain
  - a) Long lead-time components
  - b) Critical Components / specified vendor / single source
  - c) ECO (tracking). How does the process work
  - d) Battery aging / refrigeration / handling / lead time
  - e) Consigned / assigned parts
  - f) Flex parts / Skus / late customization
  - g) Batch tracking / Qty – look out for next batch
  - h) Special materials / tight tolerances
- 6) IP
  - a) SW Protection / data transfer
  - b) ME Protection
  - c) EE Protection
- 7) Manufacturing
  - a) CM Team
  - b) Fixtures
  - c) Inspection
  - d) Mold layout / Families / Colors
  - e) Rework – glues, etc
  - f) Hazardous materials
  - g) Ramp up
  - h) Spare tools for changes
  - i) Material handling (ESD / custom PCB holders)
  - j) Leveraging of FE engineering
  - k) In country oversight. Day to day.
  - l) Sustaining Engineering (where). Cost down, quality up.
  - m) Access to top management – priority
  - n) IP Protection / separated area
- 8) Packaging and Manuals
  - a) Environmental

- b) Suitability – do they explain in sufficient detail
- c) Cost
- d) Rework ability (shrink wrap)
- e) Volume / wasted space / disposables
- 9) Process
  - a) ECN
  - b) CM Communications
  - c) Costing
  - d) Approvals
- 10) CM Contact
  - a) Terms
  - b) Return allowance
  - c) What's included
- 11) Costing
  - a) Margin
  - b) Transparency
  - c) Changes
- 12) Customer Support
- 13) SEALS – what if