



2026 Build-Off Event Criteria

Event Dates & Teams

MasterTech Expo — March 12–15, 2026

Dates:

- **Friday, March 13** and **Saturday, March 14**, 2026
- Two-day live competition during the Expo show floor hours

Teams:

- **Two teams**, each consisting of **three highly skilled fabricators**
- Teams are selected based on experience and reputation in the industry
- Collaboration, communication, and workflow management will be evaluated informally by attendees throughout the build

Time Allocation

- **Total Build Time:** 7 hours total (3.5 hours per day)
- The clock starts and stops exactly at the scheduled times — no exceptions
- Teams must manage their time efficiently across both days, especially regarding glue-drying time, upholstery sequencing, and assembly order
- A visible countdown clock will keep pressure high and let the audience experience the “real shop” rush

Task Details

Objective:

Each team must design and build a **fully functional subwoofer enclosure** and a **corresponding trim panel package** that meets professional-grade fabrication standards.

Key Requirements:

- All physical parts must be built **live on stage** using only the tools, hardware, and materials supplied by the event.
- **No pre-made parts, templates, jigs, or CNC-cut panels** may be brought to the competition.
- Teams *may* prepare **engineering drawings, 3D models, cut lists, CAD plans, or workflow documents** ahead of time, but all cutting, shaping, and construction must occur on site.
- The enclosure must be structurally sound, correctly sized for the designated woofer, and incorporate the trim and aesthetic elements defined in the challenge.

Audience Value:

The build-off mirrors a real-world shop environment — attendees can watch how top-tier builders think, plan, communicate, and adjust under pressure.

Live Checklist Display (Work Order Tracker)

This checklist will be displayed on a **giant board or projected screen** so attendees can follow each team's progress step-by-step — exactly like a production workflow inside a professional fabrication shop.

Each team must move through key phases of the build:

1. Box Construction

- Cutting and assembling enclosure panels
- Internal bracing, reinforcement, and woofer mounting solutions
- Proper adhesives, fasteners, and sealing techniques

2. Router Work

- Creating complex shapes, recesses, reveal lines, rabbets, and insets
- Panel detailing that enhances both structure and aesthetics
- Safe, efficient handling of router operations

3. Mounting Brackets / Attachment Systems

- Designing and fabricating secure mounting points for trim and enclosure
- Ensuring serviceability (easy removal and reinstallation)
- Integration of metal, acrylic, or composite mounting solutions

4. Lighting & Magnets

- Installing LED lighting channels or accents
- Wiring management and concealment
- Magnetic trim systems, alignment, and clicking action

5. Upholstery Work

- Vinyl, leather, suede, grill cloth, or fabric stretching techniques
- Seam placement and wrapping strategies
- Eliminating wrinkles, bubbles, or distortions
- Professional-level finish expected

6. Finishing Touches

- Final assembly and alignment
- Surface cleanup
- Ensuring all components fit, operate, and present beautifully

Judging Criteria

1. Craftsmanship

- Cleanliness and precision of cuts
- Accurate joinery and structural integrity
- Symmetry, alignment, and professional finishing
- Attention to detail at every stage

2. Creativity & Design

- Innovation in shape, layout, and visual style
- Integration of modern fabrication techniques
- Ability to elevate a standard enclosure into an OEM-plus or show-level piece

3. Use of Materials

- Efficient and smart use of the supplied materials
- Avoiding waste and maximizing resourcefulness
- Creative problem-solving using what's available on the stage

4. Functionality

- Correct air volume and internal architecture
- Magnet retention systems operating smoothly
- Trim panels attach/remove cleanly
- Lighting components work reliably
- The final product must be durable, service-friendly, and installation-ready

Judging will be performed by a panel of respected industry experts, with scoring sheets capturing the measurable elements of build quality.

Audience Engagement

As teams complete each stage, a staff member will **check off** the corresponding box on the giant work-order board.

This creates:

- A real-time scoreboard
- Transparency into each team's workflow
- A teaching tool for attendees
- A dramatic moment when teams approach the finish line