



**BASS BOXING**



**DEMO BOXING**

**Competition  
Rules**

**2026**

# **IASCA's Three SPL formats are competitions that measures the maximum sound pressure level (SPL) generated from an automotive sound system.**

## **It's all about how loud you can get!**

**IASCA SPL FORMATS** and their Divisions and Classes are designed to give all competitors, from newcomers to local competitors and seasoned veterans, a "place to play".

IASCA classifies all SPL format competitors by four criteria;

**Vehicle type**  
**Amount of square inches of subwoofer cone area**  
**Level of modifications to the vehicle**  
**Amount of equipment in the vehicle.**

Once classified, competitors compete against others with similar systems to achieve their highest possible SPL score. The competitor with the highest score in their Class is the winner.

### ***"Why classify competitors by square inches of subwoofer cone area?"***

Because there are so many different types, shapes and sizes of subwoofers available on the market today, this format allows a competitor to compete against another with approximately the same "amount" of subwoofer cone area. Oftentimes you'll hear of a competitor running two 12 inch subwoofers competing against someone who has two 15 inch subwoofers; hardly an even match. By using the square inches of subwoofer cone area formula, a competitor with two 12 inch subwoofers would compete against another competitor who may be running either two 12 inch subs themselves, or three 10 inch subs, or one 15 inch sub; not someone with two 15 inch subs.

### ***"Why classify by vehicle type?"***

Certain vehicle types are more conducive to achieving higher SPL levels, because of their physical size or design. A person with a minivan, SUV or hatchback (for example) can build a much larger subwoofer enclosure and use bigger amplifiers simply because they have the space to do so. This isn't fair to those who may own a sedan, or pickup truck.

Vehicle types play a much bigger role in the entry level Divisions, as "new" competitors may not have the experience that veteran competitors do about these vehicle types. Therefore, entry level Divisions and Classes are designed to give the newcomer an equal advantage so they can be competitive.

### ***"Why classify by vehicle modifications?"***

It has been proven that certain modifications to a vehicle can enhance SPL performance, so classes are based on the level of modifications to a vehicle for that purpose.

### ***"Why classify by amount of equipment?"***

Veteran competitors know that increasing the amount of batteries or amplifiers can give them a decided advantage in competition. So, in order to give new members of our sport a chance to be competitive, some lower classes have equipment limitations in power and amount, creating a level playing field for all member types.

## SPL FORMATS



This is **IASCA** 's core SPL competition format. **IdBL** Divisions are based on vehicle type and the level of modifications to the vehicle. **IdBL** Classes are based on the cumulative total of all subwoofer cone surfaces in square inches.

Sound Pressure Level (SPL) measurements in decibels are registered using the Official **IASCA** SPL meter . Determining the winner is simple; the highest score in each class wins! Any metering system may be used at 1X or 2X events, however at 3X's and WRE events, the Official **IASCA** SPL meter must be used.

IdBL has "power classes" as well, where power output from the amplifiers is limited. To ensure competitors don't exceed the allowed power output, judges will utilize an SPL meter with a clamping system that measures power output.

Typically, most show promoters will offer two scoring attempts, giving each competitor the opportunity to increase their previous score. The highest score of the two attempts will prevail.

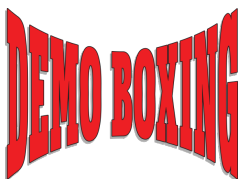


**IASCA BASS BOXING** is a type of SPL competition (sound pressure level) using full range music as the main judging criteria. Bass Boxing pits several competitors against each other until one competitor prevails as "Champion". It's a true test of how a system performs in every day applications.

**The Qualifying Round** is a 30 second round. Competitors are allowed to use **any clean (of explicit lyrics) music that has a beat (and no embedded tones)**. All competitors compete in the qualifying round and the top two (2) contenders with the highest **average** SPL score in each Bass Boxing Division will move on to the final rounds.

**Final Rounds** - The top two competitors in each Division will go against each other in an all out, full range musical SPL competition for three final rounds. In these rounds, competitors may once again choose any clean music. Each Round has specific criteria; please read the General Bass Boxing Rules on the next page for details. These rounds will also last 30 seconds each and the Judges will register the highest average SPL score during that timeframe.

In all Bass Boxing competition rounds, **the full range of music (not just bass) must be heard cleanly and clearly by everyone (outside sound), including judges, so the goal is to build a system that sounds as loud and good outside as it does inside!**



**IASCA Demo Boxing** utilizes the same rules as Bass Boxing, including a qualifying round, except Demo Boxing has less classes, and only one 90 second final round for each class. The frequency cap is set to 30 HZ, but competitors are allowed to have any parts of the vehicle open. The loudest in the final round is the winner of that class.

# OUTSIDE SOUND

**The concept of outside (or external) sound in Bass Boxing competition is so the spectators can hear and enjoy the music like you do when you're driving your vehicle.**

**Traditional SPL competitions usually don't involve the spectators, so by playing clean, clear music shows them you appreciate the mids and highs as much as the bass your system can deliver.**

Those who are not familiar with car audio only understand what they hear, like the “boom, boom, boom” of high end car audio systems driving down the street; they don't realize that inside the vehicle, high quality, full range music is playing and can be clearly heard. The goal with the outside sound rule is to allow spectators to hear what we hear on the inside. We know music sounds much better with bass, but until someone who is unfamiliar with sound hears that for themselves, they'll never know.

**This does NOT mean you have to mount speakers on the outside of your vehicle.** It means that the **full range** music must be heard **outside the vehicle** clearly and cleanly. If you want to mount speakers outside the vehicle you may do so, but it is not a requirement.

- **If you use outside speakers, the speakers do not have to be permanently mounted to the vehicle, but** must be properly and securely mounted when competing; **speakers can be mounted anywhere in, on or around the vehicle, so long as they are able to be clearly heard outside.** Speakers not permanently attached to the vehicle must be properly mounted in some type of enclosure. *Cardboard boxes, foam molds, sitting on cushions, etc... are not considered an acceptable enclosure for exterior speakers.*

The chart below shows you the total amount of square inches of cone area in a pair of standard car audio speakers; use it to determine what speakers will fit in your Bass Boxing Division. The rules state a minimum amount of cone area for outside sound, but there's no maximum amount, so go crazy if you want to!

Speaker size conversion chart						
Speaker Size	6"	6 1/2"	5X7	6X9	8"	10"
Speaker Qty.	Total Square Inches					
1 pr.	56.52	66.33	54.96	84.78	100.48	157.00
2 pr.	113.04	132.65	109.92	169.56	200.96	314.00
3 pr.	169.56	198.97	164.88	254.34	301.44	471.00
4 pr.	226.08	265.29	219.84	339.12	401.92	628.00

# SUBWOOFER CONE AREA

**“How do I calculate how much subwoofer cone area I have in my system?”**

There are different methods for calculating cone area, depending on the shape of the subwoofer. For round subwoofers, the formula for calculating cone area is *Radius squared times Pi (3.141593)*. For square subwoofers, simply multiply two connecting sides for the total square inches per sub.

**Round subwoofer example:** Take a ten inch round subwoofer; the radius of all subwoofers is half the diameter, so the radius of a ten inch subwoofer would be 5 inches; the radius squared would be 5 times 5 which equals 25. 25 times Pi (3.141593) equals 78.5. And there you have it; the total cone area of a ten inch subwoofer is 78.5 square inches.

Once you know the amount of square inches of subwoofer cone area you have for each size of sub you have, simply multiply that by the amount of subwoofers you have in your vehicle and you'll get the total cone area for your vehicle.

**“Where do I measure my subwoofer from?”**

To calculate the amount of square inches of subwoofer cone area, measure the subwoofer from the edge of the basket to the same point on the exact opposite side of the woofer (see figure 1A below). **NOTE:** If necessary, Judges will measure the diameter of the woofer basket (basket edge to basket edge) to determine woofer size and use the chart below to determine total cone area. If there is a dispute as to the woofer size, the burden of proof falls to the competitor; judges may request that a woofer be removed from its mounting position for proper measurement; if a competitor refuses to remove the woofer, size determination will be at the Judge's discretion.

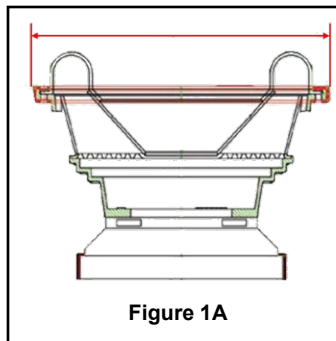


Figure 1A

Round Speaker Conversion Chart										
Speaker Diameter										
SPEAKER SIZE	5.25	6	6.5	8	10	12	15	18	21	24
Speaker Qty.	Total Square Inches									
1	21.6	28.3	33.2	50.3	78.5	113.1	176.7	254.4	346.4	452.4
2	43.3	56.5	66.4	100.5	157.1	226.2	353.4	508.9	692.7	904.8
3	64.9	84.8	99.5	150.8	235.6	339.3	530.1	763.4	1039.1	1357.2
4	86.6	113.1	132.7	201.1	314.2	452.4	706.9	1017.9	1385.4	1809.6
5	108.2	141.4	165.9	251.3	392.7	565.5	883.6	1272.3	1731.8	2261.9
6	129.9	169.6	199.1	301.6	471.2	678.6	1060.3	1526.8	2078.2	2714.3
7	151.5	197.9	232.3	351.9	549.8	791.7	1237.0	1781.3	2424.5	3166.7
8	173.2	226.2	265.5	402.1	628.3	904.8	1413.7	2035.8	2770.9	3619.1
9	194.8	254.5	298.6	452.4	706.9	1017.9	1590.4	2290.2	3117.2	4071.5
10	216.5	282.7	331.8	502.7	785.4	1131.0	1767.1	2544.7	3463.6	4523.9
11	238.1	311.0	365.0	552.9	863.9	1244.1	1943.9	2799.2	3810.0	4976.3
12	259.8	339.3	398.2	603.2	942.5	1357.2	2120.6	3053.6	4156.3	5428.7

IdBL Class	Bass Boxing Class	Demo Boxing Class	CONE AREA	WALLS	MAX AMPS	MAX POWER	WOOFER / AMP LOCATION	INTERIOR MODS	ALTS	MAX VOLTAGE
TRUNK/PICKUP 1	BANTAMWEIGHT TRUNK/PICKUP	DEMO NO WALL	1 - 240	No	1 amp/pair	3,000	Cargo area	No	1	15.5V
HATCHBACK/SUV/MINIVAN 1	BANTAMWEIGHT	DEMO NO WALL								
TRUNK/PICKUP 2	CRUISERWEIGHT TRUNK/PICKUP	DEMO NO WALL	1 - 480	No	1 amp/sub	6,000	Cargo area	No	2	15.5V
HATCHBACK/SUV/MINIVAN 2	CRUISERWEIGHT	DEMO NO WALL								
TRUNK/PICKUP 3	FLYWEIGHT TRUNK/PICKUP	DEMO NO WALL	1 - 750	No	Unltd.	Unltd.	Cargo area	Cargo area	3	15.5V
HATCHBACK/SUV/MINIVAN 3	FLYWEIGHT	DEMO NO WALL								
ADVANCED NO WALL 1	LIGHTWEIGHT 1	DEMO NO WALL	1-750	No	Unltd.	Unltd.	Behind B pillar	Behind B pillar	Unltd.	18V
ADVANCED NO WALL 2	LIGHTWEIGHT 2	DEMO NO WALL	750+							
ADVANCED 1	WELTERWEIGHT	DEMO WALL	1 - 750					Behind B pillar	Unltd.	18V
ADVANCED 2	MIDDLEWEIGHT	DEMO WALL	751 - 1400	Yes	Unltd.	Unltd.	Behind B pillar	Behind B pillar	Unltd.	18V
ADVANCED 3	HEAVYWEIGHT	DEMO WALL	Unltd.					Yes		
ULTIMATE	NO HOLDS BARRED	DEMO ULTIMATE	Unltd.	Yes	Unltd.	Unltd.	Behind B pillar	Yes	Unltd.	18V
<b>OPTIONAL</b>										
STREET (First year competitors)			1 - 240	No	1 amp/pair	1,000	Cargo area	No	1	15.5V

## GENERAL RULES - SPL FORMATS

**ANY RULE, ITEM or MODIFICATION NOT COVERED** within the pages of this rule book, for any Division or Class, **will be deemed illegal in IASCA competition, no exceptions.**

### General Rules While In The Lanes

1. If a vehicle's system is capable of **exceeding 165 dB**, competitors **must operate** the sound system from **outside of the vehicle**. Failure or refusal to do so subjects the competitor to a score of zero or disqualification without recourse. **IASCA** will not permit any competitor to be inside of a vehicle that could register over 165 db, with or without hearing protection.
2. Competitors in any Division or Class with a vehicle system **not exceeding 165 dB**, who choose to operate their sound system from inside the vehicle during SPL testing, **must wear approved hearing protection**. **IASCA** always recommends operating an SPL competition system from outside of the vehicle in every situation. Competitors who choose to operate the sound system from inside the vehicle do so at their own risk and **IASCA** is not liable for any physical harm that may come to a competitor while competing, including but not limited to hearing damage.
3. Only one (1) person (the competitor or assigned co-pilot) is allowed to be sitting inside the vehicle during testing, no exceptions. Competitors operating their sound system from inside the vehicle while competing must operate the system from the standard driver's seat seating position. Competitors must be seated, in an upright position (competitor's back against the seat back), as if they were driving the vehicle; no other seating position is acceptable. Additionally, the driver's seat must not tilt forward (less than 90 degree angle from the seat cushion).
4. The frequency cap for **IdBL** competition is set at 100 Hz.
5. The sound system in the vehicle must be powered by the vehicle's charging system and batteries **only**. External power supplies, trailers, or chargers may not be attached to the vehicle during testing.
6. There are specific power input voltage limitations per Division; please refer to the individual Division rules for specific voltage limitations. During testing, **IASCA** Certified judges may elect to connect a voltmeter to the vehicle's electrical system to ensure compliance with this rule. *It is the competitor's responsibility* to ensure that easy access is available to power connections so that judges can connect the voltmeter safely and in a timely fashion. Failure to allow judges to connect a voltmeter to the vehicle's electrical system during testing could result in a score of zero (0), or disqualification from the competition.
7. The use of compressed air, explosive devices or gases, or any noise making devices (e.g. air horns, train horns), etc. is not allowed.
8. Vehicles must be either driven or pushed manually into the competition lanes, they cannot be brought into the lanes on a trailer, or pushed or towed by another vehicle. Vehicles must be able to be driven in to the lanes under its own power with a driver in the driver's seating position using standard vehicle controls (steering wheel, and gas and brake pedals), with exceptions granted by the head judge under special circumstances, or if specified in the class criteria.
9. Maximum allowed engine rpm in competition while in the lanes is 2,000 rpm. Competitors may run at 2,000 rpm or lower and must attempt to maintain the engine rpm at 2,000 or less if at all possible. Competitors will not be penalized if they exceed that range in an unintentional short burst during the run. NOTE: Should the competitor continually exceed the rpm range in continuous short bursts, or a continued long burst, and the judge believes it to be intentional, the competitor could receive a score of zero for the run, regardless of what score they achieved.
10. **If the vehicle is running during testing, the parking brake must be set.** If the parking brake cannot be set, the competitor must use wheel chocks under the vehicle's tires to ensure the safety of everyone around the vehicle, or shut the vehicle off during testing.
11. Driver and passenger doors must have a flexible gasket seal between the door and doorjamb (door frame) to provide a safe routing of the measuring device cable, protecting it from being cut or pinched. In certain cases, alternative protection devices will be allowed at the Head Judge's discretion. In all cases, the measuring device cable provided by the **IASCA** judge must not pass through any connection devices that are mounted in or on the vehicle.
12. Competitors are not allowed to have any panels, covers or tinting blocking the view to the inside of the vehicle during testing. Window tinting is acceptable, so long as it does not impede the judge's view of any component of the measuring equipment.
13. Nothing may interfere with the proper positioning of the sensor or the sensor jig, or block any path to position the sensor or the jig.
14. The equipment reproducing the program material must be commercially available through standard retail channels. This includes, but is not limited to, amplifiers, speakers/subwoofers, CD head units, processors, batteries, capacitors and wiring. If a piece of equipment is in question, it will be at the discretion of the event Head Judge to allow its use or not. Modifications to equipment are allowed in certain Divisions; refer to the criteria for each Division to establish what is allowed.

## GENERAL RULES - SPL FORMATS

15. In IdBL and Bass Boxing first rounds, all panels of the vehicle (hood, doors, trunk/hatch, sunroof, windows, tonneau covers, truck caps, toppers, etc..) **must be closed during testing** for the duration of the SPL run (30 seconds). At no time during the SPL run can any panel be opened until the SPL run is complete. Failure to comply with this rule may result in a score of zero (0) for that run. For Bass Boxing second and third rounds, specific doors may be opened according to the respective round rules. In Demo Boxing, any door or panel may be open. **Exception:** Certain vehicles that have their source units mounted in or behind panels, so as to allow operation of the system from outside the vehicle, may be exempt provided the open panel does not allow airflow to the inside (or venting to the outside) of the vehicle during testing. The competitor must advise the Head judge of this before competing and prove to the judge that the interior compartment remains sealed.
16. In classes where the front seats may be removed for testing, the driver's seat must remain in the vehicle when being moved into the competition lanes for safety reasons while the passenger seat may be removed before entering the lanes. Once in the lanes, the seat may be removed.
17. Vehicles equipped with OEM factory "fold down" rear seats may be folded down during testing; however, the seat must maintain full functionality and nothing may impede its proper operation.
18. In IdBL, test tones or full range music are allowed.
19. In Bass Boxing, competitors **must** play full range music (see Glossary Of Terms) and the music may contain a "bass beat", but not a continuous bass tone. Music with constant sine sweeps, test tones, bass drops, bass bombs, etc. are not allowed. Music CDs with test tones, sweeps, bass drops or bass bombs embedded in the music background **may** be allowed if the tone is not constant and the duration of each tone does not exceed two seconds in length; check with your IASCA Official to see if the music you wish to play will be allowed.
20. In Bass Boxing, **musical tracks rated with "Parental Advisories", or musical tracks with lewd or suggestive lyrics are strictly prohibited.** If the judge(s) hear any profanity or lewd or suggestive lyrics more than a total of 3 times, the result will be a score of zero for that round. Competitor "shows" must also be socially acceptable. Any display that is deemed offensive in nature by the judges will not be allowed and could result in disqualification without recourse. If you are uncertain whether any part of your "show" is appropriate or not, please consult with the Bass Boxing judges for verification as to its compliance.
21. In Bass Boxing, competitors must demonstrate they can play full range music before, after, or during the 30 second run. If the competitor cannot demonstrate this, there will be a 2 point db score deduction (per round) from the average score for that round. Each Bass Boxing Division has minimum speaker size and power requirements, refer to the Division rules for details.
22. **EQUIPMENT FAILURE** - If equipment fails while in the "Bass Boxing ring" **prior** to competition, they will be allowed 5 (five) minutes to repair the problem. If a breakdown occurs during competition, the average score they achieve for that round will be official. However, they will be allowed a 5 minute breakdown period between rounds to correct the problem. If the problem cannot be corrected in the 5 minute time period, they can run as they are or receive a score of zero for the following round. If the problem cannot be corrected within the allotted time and the competitor cannot compete in the following rounds, it will be considered a TKO and their opponent will win by default.



## GENERAL RULES - SPL FORMATS

### **General Vehicle Criteria for All Classes (Class details begin on following pages)**

23. The Head Judge has the right to require any competitor to tear down their vehicle and/or system for the purpose of rules compliance. Refusal to do so may result in a score of zero (0) and loss of position, or possible disqualification.
24. Vehicles that are *not* allowed to compete in the Street Division, Class 1 2, or 3, or Bantamweight, Cruiserweight, Flyweight or Featherweight include, but are not limited to; limousines, conversion vans, ambulances, buses, delivery trucks and/or vans (cube vans), motorhomes, armored cars and/or any other vehicle that has been built or modified by someone other than an automobile manufacturer. If there is a question as to the legality of a vehicle in a class, the decision will fall to the **IASCA** Head Office and that decision will be final. If a vehicle in question attends an event to participate, the event officials are instructed to allow the vehicle to compete and after the event, send the information to the **IASCA** Head Office to be reviewed for the decision. If the vehicle is found to be illegal for competition in the class, it will be reclassified and the competitor, officials and event host will be notified immediately. Vehicle and competitor positioning and CAP points will be adjusted for that event.
25. All OEM panels and components in the vehicle must remain in their factory mounted location unless specified in the Class rules (e.g. rear deck trim panels, door panels, headliners, dashboards, seats, seat belts, etc.). All OEM factory seals and gaskets must be in place on all functional panels, including but not limited to; doors, trunk, hatches, glass, etc. All mounted interior panels and components, and their parts, must remain within the interior of the vehicle. **Exception:** Panels that are designed to be removable **without the use of tools**, such as a hatchback cargo cover, can be removed. Any issues regarding the intent of the manufacturer with an item will be decided by event officials and their decision will be final.
26. Aftermarket and/or custom center consoles are allowed, but said console/s must be securely mounted and functional. "Functional" means that the console must provide storage for accessories and/or house functional electronic equipment. If in the opinion of the **IASCA** official, the console is designed for the purpose of increasing SPL, they may reclassify the competitor to a higher Division. Any aftermarket or custom console installed in Street Division, Class 1 2, or 3, or Bantamweight, Cruiserweight, Flyweight or Featherweight cannot extend in height past the bottom of the steering wheel. In the case of vehicles equipped with tilt steering, the steering wheel will be positioned perpendicular to the steering column to take the measurement. **Exception** - Advanced and Ultimate Division vehicles are exempt from this rule.
27. For older vehicles where the OEM factory replacements may not be available, an aftermarket equivalent may be used in its place. If an aftermarket equivalent is used, competitors must notify the **IASCA** Officials at the event as to its use. The **IASCA** Officials will inspect the equivalent to determine if it is used for that purpose, or for the purpose of increasing SPL.
28. Barriers or partitions between driver and passenger compartments are not allowed. No modification designed to divide the passenger compartment from the driver's compartment above the top of the vehicle's dashboard (Ultimate Division) and/or console (All other Divisions) is acceptable.
29. Competitors in all Divisions and Classes may use specific items to cover or tie down external components on the outside of the vehicle, in order to reduce those components from rattling (e.g. roof racks, license plates, rear spoilers, etc...). Items that may be used to reduce rattling are: blankets, bungee cords, rope and similar items. Items that cannot be used are such items that weigh an excessive amount that could potentially increase SPL, such as cement blocks, filled water bottles, batteries, wood boxes and the like.
30. No additional brackets or holders may be attached to the vehicle in any way, or anywhere, on the vehicle, for the purpose of housing additional equipment of any type, unless specified for that class. The complete vehicle exterior (and interior based on class specifications) must maintain its OEM factory look.
31. Competitors in all Divisions and Classes (except in the Ultimate and NHB Division) are **not allowed** to add additional items to the interior of the vehicle in order to decrease cabin volume for the purpose of increasing SPL.
32. Any items in the interior of the vehicle (in all Classes, no exceptions) **must** be solidly attached to the inside of the vehicle and designed to remain in the vehicle, while competing or not. Therefore, items similar to those listed in the rule above, such as cement blocks, wooden boxes, water jugs and the like cannot be placed in the vehicle prior to competing or while in the judging lanes. If any these items are built in to the installation of the system and have been mounted solidly, they will deemed acceptable only after inspection from the Head judge.
33. All OEM factory windows in the vehicle designed by the manufacturer to be operational (except sunroofs), must be able to fully function as the manufacturer intended them to and nothing can impede their proper operation. OEM glass may not be replaced with any transparent substitute material, unless specified in the rules for the class. Factory windows behind the B pillar are exempt from this rule in classes where modifications behind the B pillar can be made.
34. Vehicles with cracked or broken windshields will be allowed to compete **if** the cracks are covered with a protective material (e.g. duct tape) to eliminate any chances of the glass breaking out of its mounting. Tape may also be used to secure windshields or windows for safety purposes.
35. All openings to the interior of the vehicle must have some form of gasket or seal to eliminate any chance of venting to the outside of the vehicle during testing.
36. Sunroofs may be sealed with glue or tape, but not welded shut.

## GENERAL RULES - SPL FORMATS

### General Equipment Criteria for All Classes (Class details on following pages)

37. The following source units are acceptable for competition - CD source (head) units, iPods, tablets, media players, DAT, mini disc, hard drives, and phones.
38. **Subwoofer Wall (1)- For any vehicle that is NOT a PICKUP TRUCK.** Any subwoofer enclosure exceeding 25 inches in height, **inclusive of any and all equipment attached to the enclosure**, will be considered a subwoofer "wall" in the vehicle. Determination of enclosure height will be taken by measuring from the floor of the area where the enclosure is located to its highest point from the floor, inclusive of any equipment attached to it. *This includes any "supports" or "legs" that prop up the enclosure and any components attached to the enclosure (amplifiers, subwoofer basket/surround, power distribution block, etc.), but does not include a false floor that is not a part of the enclosure.* If any part of an enclosure utilizes an area lower than the floor of the OEM cargo area (such as a spare tire well or section of floor where a backseat was present), the 25 inch height measurement will be taken from the lowest point of the enclosure. **EXCEPTION:** Enclosures that **slightly** exceed the 25 inch height rule (within 0.25" to 0.5") may not be considered a wall **IF** in the judge's discretion, the increase in height was not intended for the purpose of increasing SPL.
39. **Subwoofer Wall (2)- PICKUP TRUCKS** that have an *enclosure in the interior compartment of the vehicle* (not the bed of the truck) will be classified as "no wall" vehicles, as long as the enclosure, including all equipment attached, does not sit higher than the lowest point of the rear window (The 25" rule does not apply here). **Pickup trucks** with "cut throughs" through either the rear cab wall or through the back window will be considered as a *wall*, whether the enclosure is taller than 25 inches or not.
40. **Regular cab, extended (king) cab and crew cab trucks** that **do not** have a "cut through" from the bed to the cab. These vehicles are the only vehicles where equipment and enclosures are allowed to be mounted in the passenger compartment of the vehicle. There are certain guidelines for competitors with these vehicles; **REGULAR CAB TRUCKS** (Compact and Full Size trucks) - The cargo area is considered as the area directly behind the seating in the vehicle and the subwoofer enclosure must be mounted behind the seats. The seats must be able to lock into upright position. Internal brackets may be removed to help facilitate the installation of equipment or enclosure as long as any exposed metal is covered with OEM like fabric, such as carpet. **EXTENDED (KING) AND CREW CAB TRUCKS** (Compact and Full Size) - The cargo area is considered as the area behind the B pillar and the subwoofer enclosure must be mounted behind the B pillar. The enclosure cannot impede the full operation of the front seat and seat travel must remain intact. Rear seating and internal brackets may be removed to help facilitate the installation of equipment or enclosure as long as any exposed metal is covered with OEM like fabric, such as carpet. **Specialty Trucks** - Specialty trucks such as the Chevrolet Avalanche, El Camino, Honda Ridgeline, etc. are not exempt from this rule; if an enclosure completely blocks and seals off the opening between the cab and bed of the vehicle, it will be considered as a cut-through.
41. **Regular cab, extended (king) cab and crew cab trucks** that **have** a "cut through" from the bed to the cab, where:
  - no modifications are made above the lowest point of the rear window ("cut through" is below the window line),
  - **AND** the bed of the truck has a tonneau cover that rests directly on top of the sides of the OEM truck bed when fully closed and covers the entire OEM truck bed, and the tonneau cover itself is no more than 6 inches in height,
  - **AND** the enclosure is within the "cut through" and is under the fully closed tonneau covermay be allowed to compete in **Advanced No Wall 2 (and Lightweight in Bass Boxing)** as long as the rest of the class criteria is met.
42. **PICKUP TRUCKS - Equipment other than subwoofers/enclosures** - competitors may mount other equipment, such as amplifiers, batteries, etc. in the bed of the truck if they so choose. Equipment, other than battery banks or lithium batteries, is not required to be covered, however it is recommended that it is for protection from the elements. Battery banks and lithium batteries must be covered per additional rules pertaining to those batteries and banks.
43. **SUV's and Minivans** - The cargo area is considered as the area directly behind and underneath the second row of seating in the vehicle. If the vehicle is equipped with a third row (or more) of seating, it will not affect the positioning of the enclosure so long as the enclosure remains behind the second row of seating. Third row (or more) seating only may be removed from the vehicle for competition, but the second row seating must remain intact and securely fastened in the vehicle (emulates a 4-5 passenger vehicle).
44. Full range speakers added to the sound system for sound quality purposes only are allowed within the vehicle interior forward of the B pillar. Speakers forward of the B pillar installed for the purpose of increasing SPL are not. In Bass Boxing, there are limitations to the amount of additional full range speakers that may be added to a system forward of the B pillar inside the interior; refer to your Class rules for the proper amount of speakers that may be added. Competitors may build "kick panels" or "speaker pod build outs" on door panels to house additional speakers. NOTE: Factory door panels cannot be completely covered with the speaker pod build out. The pod must be attached to the existing door panel and only large enough to house the speaker. Speaker pod build outs designed for the sole

## GENERAL RULES - SPL FORMATS

purpose of increasing SPL are not allowed.

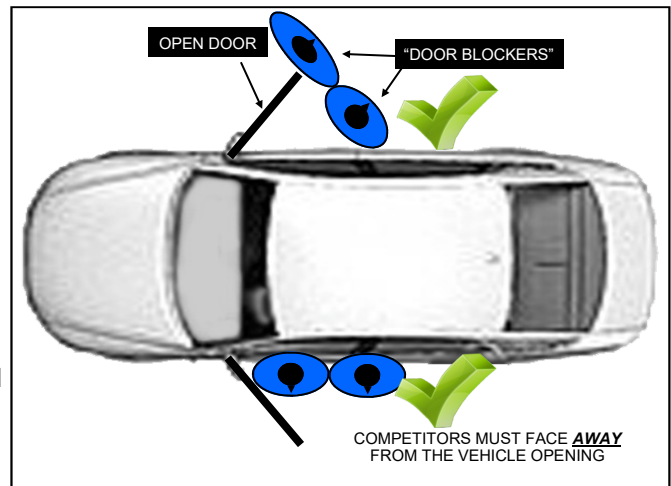
45. All batteries in the vehicle should be connected to the vehicle's charging system. Batteries in the vehicle that are not connected to the vehicle's charging system, or any system equipment, will not be counted as long as the competitor can prove they are not connected to any part of the vehicle/system and the Judge can confirm this.
46. Any battery banks (multiple batteries) must have a cover to protect the buss bars and/or terminals for judges' safety.
47. Commercially available (sold in retail environment as a complete product with warranty) lithium batteries are fully legal in **IASCA** competition. Other lithium batteries purchased in individual pieces with no warranty and/or support (AKA, DIY lithium) must implement the following, and must be visible to the judging staff:
  - External casing to prevent individual cell movement as well as provide protection from shorts across terminals.
  - Secured within vehicle to prevent assembly movement (like all batteries).
  - Active cell balancing circuit(s). Passive cell balancing is insufficient.
48. **CAPACITORS AND "SUPER CAPS"** - Capacitors - Standard capacitors and "super caps" are both rated in farad count will be counted as such to the maximum allowed farad rating for the class. *NOTE* - "Super Caps", or Super Capacitors when used in a bank, will be counted no different than a regular capacitor (farad rating), however a "bank" of six (6) super caps will be considered as one (1) battery and will also fall under the battery limitation rule for the class. If there is more than one "bank" of six (6) super caps connected to the system, each "bank" of super caps will be considered as another battery.
49. All wires, including but not limited to, speaker wires, power wires, RCAs, etc., must be easily accessible by the judges for measurement, clamping and verification purposes.
50. All equipment must be safely and securely mounted.



# COMPETITION PROCEDURES

## IN THE COMPETITION LANE

1. **COMPETITORS MUST BE READY TO COMPETE WHEN CALLED UPON.** IASCA Officials (Judges) will use their best efforts to notify competitors when they are scheduled in the competition lane; three notifications will be given to the competitor. If a competitor is not ready when called into the lanes and does not report to an Official, they will receive a score of zero for that run.
2. For Bass Boxing final rounds, Bass Boxing Finalists must be ready to compete when called upon by the Bass Boxing Officials. If a competitor fails to appear for the final rounds within five minutes of being called upon, they will be subject to disqualification without recourse, declaring their opponent the Champion by default. Competitors vying for a Bass Boxing World Record may exercise the option to run unopposed in order to attempt to set a Bass Boxing World Record for their Division.
3. The competitor has **three (3) minutes** from the time the measuring device is positioned in the vehicle to prepare their vehicle for competition. If a competitor is not prepared and ready to compete within that 3 minute time frame, they will be given a warning by the Judge that they are exceeding the time limit. If it's found that a competitor is abusing the time frame privilege, *whether intentional or not*, the event Head Judge has the ability to penalize the competitor by assigning a **score of zero (0)** for that run.
4. In IdBL, a maximum of six (6) additional people are allowed to hold down the vehicle during testing. These additional people must have both feet on the ground while holding down the vehicle during testing (feet do NOT have to be flat on the ground but person(s) should be balanced on the ground and not on the vehicle), and cannot block the view between the meter judge and the competitor, or the measuring device. These same 6 additional people may move away from the vehicle during the run, but only these same 6 additional people may return to hold down the vehicle during the same run. Having a person or additional persons sitting on top of, or inside, the vehicle during testing is **not** allowed. Competitor may elect to sit on their vehicle if they wish, but only if the competitor has signed the hold harmless waiver located on the official IASCA score sheet.
5. In Bass Boxing, competitors are allowed up to six (6) people (team members) to assist them in the set up for competition. Of the 6 team members, a maximum of 2 team members **per door** are allowed as 'blockers' to be used to partially "block" or "cover" the door opening of the vehicle during testing. **These team members must face away from the vehicle openings, with their backs to the door openings and cannot push in against or lean into the opening in any way during the competition runs.** These additional people must have both feet on the ground at all times during testing with the exception of adjusting or moving for better feet position or balance (feet do NOT have to be flat on the ground but person(s) should be balanced on the ground and not on the vehicle), and cannot block the view between the meter judge and the competitor, or the measuring device.
6. Only one team member is allowed to operate the system during the competition run.
7. Once the competitor is ready to compete, they **must notify the Head Judge** that they are ready by either verbal communication (if outside the vehicle), a "thumbs up" sign or honking the horn, signifying that they are ready.
8. **It is the competitor's responsibility to ensure that they have a clear view of the Head Judge, while in the competition lane.** They are responsible to ensure that nothing interferes with their view of the Head Judge before, during, and after the run; this includes team members, manufacturer representatives, press, podiums, equipment, the vehicle or any part of the vehicle (doors, panels, etc.).
9. **During the competition run**, all equipment in or on the vehicle must be, and remain, secured in place and comply with the rules of the class for the duration of the 30 second competition run. If at anytime during the 30 second competition run a piece of equipment does not comply with the rules for the class for any reason, the run will be disallowed and the competitor will receive a score of zero for that run.
10. Once the run is complete, the competitor has **three (3) minutes** to remove the vehicle from the competition lane from the time the measuring device is removed from the vehicle. If the competitor's vehicle is not moving out of the competition lane within that 3 minute time frame, the run may be disallowed and they could receive a **score of zero (0)** for the run.



# ADDITIONAL BASS BOXING/DEMO BOXING COMPETITION PROCEDURES

## BASS BOXING

## DEMO BOXING

### QUALIFYING ROUND

The **QUALIFYING ROUND** will determine the top two competitors in each Division; ***only the top two competitors in each Division will move on to the final rounds.*** **NOTE:** Event hosts have the option of offering as many qualifying round runs as they want to; some event hosts may only offer one round due to time constraints.

**HOW TO QUALIFY** - The competitor has the option of whether they wish to have the vehicle's doors open or closed during qualifying. The competitor has two minutes from the time they enter the competition lane to get ready to compete. The round lasts 30 seconds during which time the competitor's highest **average** SPL score will be recorded. When all qualifying is complete, ***only the top two competitors*** with the ***highest average SPL qualifying score*** will move on to compete against each other in the Championship Fight.

### The BASS BOXING CHAMPIONSHIP FIGHT

The Championship Fight consists of three rounds where the top two qualifiers go against each other for the Title of EVENT CHAMPION. The top qualifier gets the choice of who goes first in the final rounds. Each Round has certain criteria that must be adhered to; please read carefully:

**ROUND 1** - In Round 1, the competitor ***must*** compete with the vehicle interior sealed from the outside. ***However, the crowd must be able to hear full range music outside of the vehicle while it is competing.***

During Round 1, vehicle openings (such as windows, doors, trunks, hatches or any panel) that when opened allow speakers to play music to the outside, can be opened ***as long as the interior compartment remains sealed from the outside.*** The use of external speaker pods, or opening panels that house external speaker pods, is also allowed. The competitor's highest average SPL score after 30 seconds will be recorded. ***NOTE:*** When panels are opened to expose external speaker pods, the system, pod or vehicle cannot allow any ventilation from the interior of the vehicle to outside in Round 1 of competition (closed door round).

**ROUND 2** - Round 2 is the same as Round 1, with one exception. In Round 2, the ***driver's side*** front door will be opened. The competitor's highest average SPL score after 30 seconds will be recorded. Competitors are not allowed to try opening and closing the door during the competition run, in order to achieve a higher SPL score.

**ROUND 3** - Round 3 is again the same as Rounds 1 and 2, with one exception. In Round 3, ***both*** driver and passenger front doors will be opened. Competitors may also have any other panels opened if they choose, but they are not allowed to try opening and closing any of these panels during the run in an effort to increase SPL. The competitor's highest average SPL score after 30 seconds will be recorded.

### DETERMINING THE CHAMPION (WINNER)

The Champion (winner) will be determined by adding up each competitor's scores from Rounds 1, 2 and 3 then dividing that total by the number of Rounds to arrive at an average SPL score for all three rounds (Qualifying Round is not included). The competitor with the highest average score for all three rounds will be declared the Champion.

# COMPETITION PROCEDURES

## EVENTS

**NOTE:** The average *IASCA* event usually offers two IdBL runs and two Bass Boxing and Demo Boxing qualifying runs, however it is at the discretion of the event host. Due to the high volume of competitors at some events, some event hosts may only have time to offer one run; please check with the event host before going to an event to verify how many *IASCA* runs they will be offering.

## BREAKDOWNS

As unfortunate as they are, breakdowns do happen. We at *IASCA* understand this and that's why we have developed a policy for this contingency; we want to offer our competitors as much opportunity as possible to rectify the situation and continue competing.

If a competitor experiences a breakdown while in the lane **prior** to being tested, they will be directed to remove their vehicle from the lane and will be allowed 10 minutes to repair the problem. If the competitor repairs the problem in the time allotted, they will be allowed to compete without penalty. However, if the competitor cannot repair the problem within the time allotted, they will receive a score of zero for that run. They have until they are called up for their final run to repair the problem and bring their vehicle into the judging lane.

## TIEBREAKERS

**IdBL**—A tie score is determined by two competitors achieving the same score after **two (2)** runs. **Example:** Competitor A scores 149.9 dB in their first run and 150.0 dB in their second run. Competitor B scores 150.0 dB in their first run and 149.7 dB in their second run. Both competitors achieved a high score of 150.0 dB after their two runs and are therefore tied. Once all regulation runs are completed, the competitors that are tied will return to the judging lane for a "tiebreaker" run. Both competitors will then be judged and the competitor with the highest score in the tiebreaker run will be declared the winner and be awarded the higher position in the standings, regardless of the previous scores. **If the tie is not broken after two tiebreaker runs, *IASCA* will award duplicate placing for the tied competitors. The results of a tiebreaker can only affect the positions below the tied competitors. If one of the tied competitors fails to appear for their tiebreaker run/s, they forfeit the position they are competing for.**

**Bass Boxing**—Qualifying ties will be run per IdBL tiebreakers. If after the three rounds there is a tie in score between competitors, the tied competitors will compete in a fourth 'tiebreaker' round with both front doors opened, vehicle only. Door blockers are not allowed to be used in the tiebreaker round.

**Demo Boxing**—Qualifying ties will be run per IdBL tiebreakers. If after the final round there is a tie in score between competitors, the tied competitors will continue to compete in a repeat 'tiebreaker' final round until a tie is broken.

## COMPETING IN MULTIPLE DIVISIONS/CLASSES, CHANGING DIVISIONS/CLASSES

Competitors may wish to change the Division or Class in between events, but they must meet all criteria for the Division or Class they want to change to. They may not change division or class at an event after they have been assigned a division or class for that event (unless an incorrect assignment has been made).

A competitor may move **up** or **down** in Division or Class during the competition season and maintain the points they have accrued, as long as they accrue a minimum of **50%** of their points in their new Division/Class during the season. The *IASCA* head office may review Division/Class movements and scores during the finals qualification/invitation period.

**If a competitor is found to be alternating between Divisions or Classes** through the competition season in order to gain points, that competitor will forfeit all points accrued in any Division or Class and have their invitation to compete at the Finals revoked for that season.

### Competitor Division and Class specifics

- A vehicle cannot run in multiple classes at the same event in the same format (i.e. Competing in Class 3 and Adv NW with the same vehicle) but may run in one class per format (i.e. Class 1 in IdBL and Bantamweight in Bass Boxing).
- Competitors with more than one vehicle must have a membership for **each vehicle**.

# IASCA WORLD RECORDS

**IASCA IdBL, Bass Boxing, and Demo Boxing** World Records are set annually and do not carry over from one year to the next. All standard procedures apply for an **IASCA** World Record Event as they do in regular event competition, however there are a few additions. Records can only be set at events where an **IASCA** Certified **IdBL** Record Official is present.

**IdBL World Records** are achieved by a competitor exceeding the highest recorded score in their class as of that date, twice consecutively during regulation runs at a sanctioned **IdBL** World Record Event. The lower of the two Record breaking scores will be considered the new official **IdBL** World Record. Upon breaking the record in the first run, the competitor's vehicle will be moved aside and inspected by **IASCA** officials, to confirm that it complies with all rules and regulations in the competitor's Division/Class.

**Prior to inspection, no one can touch the vehicle, except IASCA officials.** Once the inspection is complete, the officials will validate the vehicle and notify the competitor. The competitor has until they are called up for their next run to prepare the vehicle for the second run (charge batteries, etc...). If the competitor "backs up" their first run with a second score equal to or higher than their first run, **IASCA** officials as previously described will re-inspect the vehicle. Once the re-inspection is complete and everything is in order, the record will be official and will be recorded as such.

**Bass Boxing World Records** are achieved by a competitor exceeding the highest average three round (final rounds) score in their class as of that date at a sanctioned **IASCA** World Record Event. Upon breaking the record, the competitor's vehicle will be moved aside and inspected by **IASCA** officials, to confirm that it complies with all rules and regulations in the competitor's Division/Class.

**Demo Boxing World Records** are achieved by a competitor exceeding the highest final round (90 second round) score in their class as of that date at a sanctioned **IASCA** World Record Event. Upon breaking the record, the competitor's vehicle will be moved aside and inspected by **IASCA** officials, to confirm that it complies with all rules and regulations in the competitor's Division/Class.

World Record attempts can only be recorded on an approved Official **IASCA** meter. An **IASCA Certified** World Record Judge must be present during the run to officiate and all rules and procedures must be **strictly** adhered to. Any violation of any rule, regulation, policy or procedure will result in disqualification of the record.

An **IASCA** Certified World Record Judge must be present to officiate any **IASCA** Record Event. Each Certified World Record Judge owns an **IASCA** approved meter, which is registered to them. These meters are the only meters approved to certify **IASCA** World Records. If an **IASCA** World Record is broken, it is the responsibility of the Head Judge (**IASCA** Record IdBL Certified Judge) to notify the **IASCA** Worldwide Inc. head office.

**All IASCA World Record Event Hosts and Affiliates must verify** the competitor's **full name, address, competitor's membership number, vehicle and equipment information** and submit the information to the **IASCA** Head Office for the Record to be official.

## FOR ANY RECORD TO BE OFFICIAL

*This procedure must be strictly adhered to for any record to be official; any variation from this procedure, regardless of who is officiating the event, could be cause for the record not being recognized by IASCA Worldwide.*

- All vehicles/competitors vying for a record attempt must be properly classified.
- A classification form must be completed and signed by the **IASCA** World Record Judge to ensure accuracy.
- Once the runs are complete and the **IASCA** World Record has been set, photos of the score on the screen of the meter must be submitted to the **IASCA** Worldwide Head Office, along with the completed classification form, at the time the results are submitted.
- Failure to provide any photographic evidence, or proper documentation will nullify the record. The score will appear on the website, but will show as an unofficial score.
- Any competitor/vehicle attempting to set an **IdBL** Record **must** have an **IASCA** Worldwide Competitor Membership; the membership will outline all the vehicle and equipment details. This membership is a global membership and only issued by the **IASCA** Worldwide Head Office in the USA. National memberships from an **IASCA** Affiliate country are not valid for **IASCA** World Records. Memberships can be purchased online at [iasca.com](http://iasca.com).

# IASCA WORLD RECORDS

## WORLD RECORD JUDGING PROCEDURE

**Judging Team** – The *IASCA* Judging Team will consist of a minimum of 2 (two) judges; the World Record Certified Judge (Head Judge) who will be in charge of operating the official meter and an Inspection Judge. Additional judges are allowed; they may take over some of the duties of the Inspection Judge as approved by the Head Judge, but are not necessary to validate an *IASCA* World Record attempt.

**Time Frame to achieve a World Record** – In order for an *IdBL* World Record to be official, a competitor must beat the current the World Record score twice during regulation runs; the record must be broken within two regulation runs. *IdBL* World Records must be set during regulation runs (the allowed number of runs for that event); in the case of an event that allows only one run, **one (1) additional run** will be approved for the purpose of attempting the World Record, no more. **Bass Boxing** and **Demo Boxing** World Records must be set during regulation runs, as no additional runs are required to back up the record.

**Official IdBL World Record Score** - If an *IdBL* score beats the current World Record by a qualifying competitor (current member), then a second run will need to be run and the lower of the two scores will be the official score to use for the World Record ranking. If the official score beats the current World Record, then that official score will then be the new World Record for the season for that class. **Example:** The World Record is 150dB. Competitor first scores a 154dB. Competitor's second score is 152dB. Official score of 152dB becomes new World Record.

If a World Record is broken, the three (3) minute time frame for teardown may be extended to allow the competitor time for photo opportunities or other celebratory items. The time extension is at the discretion of the Certified World Record Judge or the event Head Judge.

**Breakdowns for competitors attempting an *IASCA* World Record**– In the case of a breakdown, **it is the competitor's responsibility** to notify the Head Judge **immediately** of the breakdown, especially if additional time is required to repair the breakdown. If the repairs cannot be completed during the regulation specified time frame, the competitor can request an extension of the time frame from the Head Judge **only** and they **may** grant the extension based on the situation. The maximum extension an Head Judge can grant will be **fifteen (15) minutes, no exceptions**. If the repairs cannot be completed within that extension, the competitor will not be allowed to run.

**Competitors and their vehicles must** comply with all the rules and regulations set forth in the *IASCA* rulebook and must maintain compliance throughout the competition runs. Any infraction of the rules will automatically rescind any World Record set. If an infraction is discovered after the event at any time, the competitor's score (and World Record) can and will be revoked.

- Each membership must fully outline the vehicle and its information as well as list all equipment used in the *IASCA* World Record attempt.
- Memberships must be purchased prior to any *IASCA* World Record attempts and cannot be purchased afterwards.



## MEASURING DEVICE PLACEMENT GUIDELINES

Event judges must ensure that the measuring device height and orientation are absolutely consistent from vehicle to vehicle. The measuring device must face towards the front of the vehicle at all times. The position is as follows for all measuring devices used in **IdBL** competition; 4 inches up from the top of the dashboard (or the base of the OEM windshield frame, whichever is higher) and 12 inches over from the OEM passenger side "A" pillar.

This is accomplished by using the **IASCA** certified placement jig. For the sensor, the jig must be positioned perpendicular (straight up and down) with the base of the jig touching the top of the dashboard and the top of the jig touching the windshield; the far right end of the jig must be touching the passenger side "A" pillar. **If the top of the dashboard is below the base of the windshield frame, then the jig may be tilted to measure the distance from the base of the windshield frame.** The sensor is then positioned in the top left opening, placing the opening of the sensor in the 4" and 12" position. At the judges discretion, the sensor may be mounted vertically or horizontally.

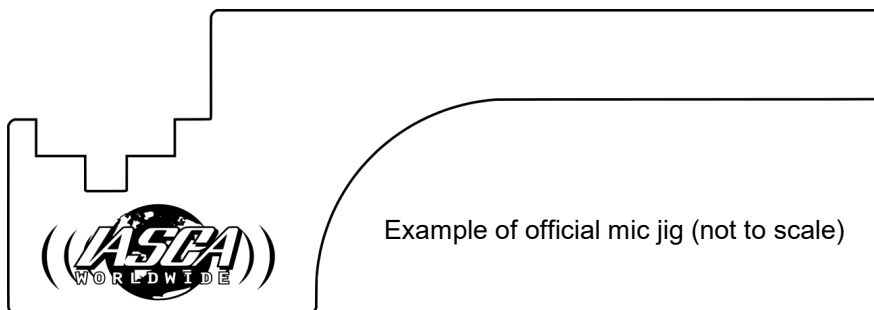
The Judge must be able to see the measuring device (sensor) from outside the vehicle at all times during the competition run; competitors are not allowed to place any covering (or tinting) on the windshield blocking the Judge's ability to see the measuring device during competition.

Nothing in the vehicle may interfere with the correct placement of the measuring device, or its placement jig .

Once the measuring device is positioned, the competitor will have the opportunity to verify it has been positioned properly. The competitor is not allowed to touch the measuring device once it is positioned, however if they feel it is not properly placed, they can request that it be repositioned and the judge is required to do so. **Note:** If the competitor requests that the measuring device be repositioned, this **does not give the competitor an extension on the 3 minute preparation time** set out before being judged. Once the measuring device has been positioned for the first time in the run, the 3 minute countdown will begin.

If the judging staff experiences an equipment failure (with either the meter, measuring device or cable) during the competitor's run, the score in that run will not count and the competitor will have the option of rerunning within a specified time period.

**VEHICLE SEATS AND SYSTEM COMPONENTS** - Vehicle seat backs, including headrests, cannot be within 24 inches of the measuring device at any point. System Components (Equipment) in the vehicle, including enclosures, walls cannot be within 24 inches of the measuring device at any point. (Exception: A pillar mounted tweeters and midrange speakers, door mounted speakers.) No item or piece of equipment may be temporarily or permanently attached to the exterior of a vehicle's dashboard or windshield, within 24 inches of the measuring device.



## CLASS 1/BANTAMWEIGHT AND CLASS 2/CRUISERWEIGHT (Trunk/Pickup, Hatchback/Wagon/SUV Minivan Divisions)

### Class 1 (IdBL)/Bantamweight (Bass Boxing) —1 to 240 sq. in. (4-8s, 3-10s ,2-12S, 1-15 inch subwoofer/s)

- Trunk/Pickup 1 (IdBL)/Bantamweight Trunk/Pickup (Bass Boxing)
- HB/SUV 1 (IdBL)/Bantamweight (Bass Boxing)

### Class 2 (IdBL)/Cruiserweight (Bass Boxing) —1 to 480 sq. in. (6-10s, 4-12s, 2-15s or 1-18 inch subwoofer/s)

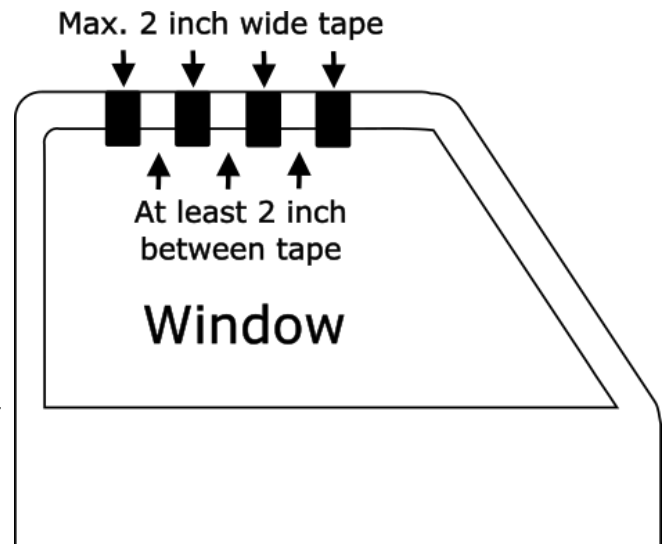
- Trunk/Pickup 2 (IdBL)/Cruiserweight Trunk/Pickup (Bass Boxing)
- HB/SUV 2 (IdBL)/Cruiserweight (Bass Boxing)

## COMPETITOR CRITERIA

- Open to all competitors

## VEHICLE CRITERIA

1. **Any modification** to a vehicle that is **not** covered in this section will be considered illegal for the division and the vehicle will be reclassified to a higher Class/Division.
2. Vehicle must be tagged (licensed) and insured for use on the road. If the vehicle is not tagged (licensed) or insured, the vehicle and competitor will be reclassified to a higher Class/Division.
3. All OEM factory windows/glass must be retained and cannot be replaced with any transparent substitute material.
4. Tape may used to hold windows into the closed position but cannot completely seal the window. Tape must be applied perpendicular to the edge of the glass and there must be at least 2 inches between tape pieces and no wider than 2 inches. **See illustration.**
5. **OEM stock interior** - All interior panels must be in place and properly mounted. Cosmetic modifications allowed (addition of full range speakers for sound quality purposes, painting of trim pieces, etc.). Small OEM trim pieces, no longer than 8 inches (door handle trim rings, plastic trim to cover screws, sail panels, etc) are not required. Kick panels and door sills are required. **A speaker pod build out is allowed on each front door panel to house speakers up to 150 square inches total cone area per door** (equates to two 8 inch mid bass driver or four 6.5 inch speakers per door - see speaker cone area chart) are allowed. **NOTE:** Factory door panels cannot be completely covered with the speaker pod build out. The pod must be attached to the existing door panel and only large enough to house the speaker. Speaker pod build outs designed for the sole purpose of increasing SPL are not allowed.
6. No panels or sheet metal in the vehicle can be modified so as to increase the SPL level of the vehicle. All sheet metal, steel, plastic, wood and any other materials used by the manufacturer to build the vehicle must remain intact and unaltered, with the following exceptions; door panel build outs and kick pods built to house operational speakers the purpose of increasing sound quality only and/or panel modifications for cosmetic purposes will be allowed. Build outs designed for the purpose of increasing SPL will not be allowed.
7. Panels or baffles designed to increase SPL, whether attached to the vehicle or enclosure, cannot be mounted in the vehicle interior.
8. All OEM panels and components, including dashboards, must remain OEM stock and in their factory mounted location.
9. The vehicle must have the factory OEM dashboard in place, intact and unmodified. All accessories/gauges/switches in the dashboard must remain functional. The only additions allowed to an OEM dashboard are the painting of "snap in" panels on the dashboard and speakers for improving sound quality only.
10. Supports, poles or braces are not allowed within the vehicle interior.
11. All seats and steering wheel (if removable) must remain securely mounted in place, while competing.
12. OEM covering (carpeting) in the trunk or hatch or interior area (e.g. carpet, panels, etc.) must remain intact in the vehicle during testing. OEM factory carpeting or covering *may* be replaced with an aftermarket equivalent that approximates an OEM factory appearance, or a custom finished appearance (cannot be raw material). OEM trunk false floors may be replaced with a sturdy replacement that is similar in rigidity.



## CLASS 1/BANTAMWEIGHT AND CLASS 2/CRUISERWEIGHT (Trunk/Pickup, Hatchback/Wagon/SUV Minivan Divisions)

13. All equipment must be mounted in the OEM cargo area of the vehicle.
14. Walls are not allowed.

### EQUIPMENT CRITERIA

All equipment must be commercially available and can not be modified in any way.

#### Source Units

- External source units are allowed. A source unit in the OEM location is not required.

#### Amplifiers

- Power will be verified using a clamp meter, digital multimeter or the Term-Lab Magnum clamping system while vehicle is competing in the lane. **If the power measurement cannot be properly made during the SPL measurement (e.g. software error, lack of wire accessibility, measurement not responding as expected, etc.), a reclassification is required to a class that does not require an amplifier power limit.**
- One amplifier means that all amplifier components must be encased within one heatsink. "Strapping" multiple amplifiers together as "one" is not considered as one amplifier.

#### Class 1/Bantamweight Amplifiers:

- Maximum one (1) amplifier **per pair** of subwoofers is allowed.
- Maximum allowed amplifier power output **3,000** watts RMS

#### Class 2/Cruiserweight Amplifiers:

- Maximum one (1) amplifier **per** subwoofer is allowed.
- Maximum allowed amplifier power output **6,000** watts RMS

#### Speakers

- For Bass Boxing, if **external** speakers are used, the system must have a minimum of 50 square inches of full range speaker. Coax, component, horns or pro audio speakers are allowed.
- Speakers mounted in the interior compartment forward of the B pillar cannot exceed 150 square inches of cone area per door (equivalent to two 8" mid bass driver or four 6.5" speakers). Speakers ***must*** play full range and cannot be low passed for sub bass frequencies only.

#### Subwoofers

- Single, dual, and quad coil subwoofers are allowed
- All subwoofers and subwoofer enclosures must be mounted in the OEM cargo area of the vehicle. Speakers and/or subwoofers mounted in the interior of the vehicle, installed with the intent of increasing SPL levels below 100 Hz, will be deemed as part of the SPL system and the vehicle will be reclassified to a higher Class.

#### Batteries

- Unlimited amount of batteries allowed. Super caps are allowed but must be mounted within the cargo area.
- A battery is not required in the factory location. Batteries must be mounted in cargo area or engine compartment.
- Batteries must be a standard automotive 12 volt battery. Lithium based batteries are allowed.
- Batteries must be commercially available through standard retail channels (i.e. auto supply store)

## CLASS 1/BANTAMWEIGHT AND CLASS 2/CRUISERWEIGHT (Trunk/Pickup, Hatchback/Wagon/SUV Minivan Divisions)

### Alternator

- The vehicle's OEM factory style alternator can be upgraded from its original OEM factory output only. Larger alternators in physical size and/or shape are not allowed.
- Outboard adjustable voltage regulators on alternators are allowed, however the controls for the voltage regulator must be mounted in an accessible location while operating the system, for safety reasons.

### Class 1/Bantamweight Alternators:

- One (1) alternator is allowed. Must be mounted in factory location.

### Class 2/Cruiserweight Amplifiers:

- Two (2) alternators are allowed. One must be mounted in factory location.

### Voltage

- Maximum voltage allowed is 15.5 volts (engine running).

### Wiring/Fusing

- Unlimited runs of wire (+ or -) are allowed.
- IASCA strongly recommends that all wiring be fused at the main power source. ***If the vehicle and system are not properly fused***, competitors ***must*** have an A-B-C rated fire extinguisher with the vehicle while competing in the lanes.

### Sound deadening (or dampening) materials

- Sound deadening may be used behind or inside any factory OEM panels, so long as the factory panel remains intact, unaltered and in its original factory OEM location and does not impede the proper operation of any of the vehicle functions. There can be no external visible evidence of the sound deadening (pieces of sound deadening material sticking out from the panels) - **EXCEPTION**. Sound deadening may be visible on the interior side of a trunk lid if that specific model of vehicle had no OEM panel on the trunk lid.
- “Stiffening” of panels is not allowed; competitors are not allowed to reinforce panels with anything other than traditional sound deadening materials available from retail car audio dealers (See “Stiffening” in Glossary of Terms).



## CLASS 3/FLYWEIGHT (Trunk/Pickup, Hatchback/Wagon/SUV Minivan Divisions)

### Class 3 (IdBL)/Flyweight (Bass Boxing) —1 to 750 sq. in. - (6-12s, 4-15s, 2-18s)

- Trunk/Pickup 3 (IdBL)
- HB/SUV 3 (IdBL)
- Flyweight Trunk (Bass Boxing)
- Flyweight (Bass Boxing)

### COMPETITOR CRITERIA

- Open to all competitors

### VEHICLE CRITERIA

1. **Any modification** to a vehicle that is not covered in this section will be considered illegal in this division and competitor will be moved up in class.
2. Vehicle must be tagged (licensed) and insured for use on the road. If the vehicle is not tagged (licensed) or insured, the vehicle and competitor will be reclassified to a higher Class/Division.
3. All OEM factory windows/glass must be retained and cannot be replaced with any transparent substitute material.
4. **Tape may be used to seal windows as long as the sensor is visible to judges. The tape used cannot interfere with the sensor or its proper placement in the vehicle for judging.**
5. **Forward of the cargo area (also known as the passenger compartment)—OEM stock interior.** All interior panels must be in place and properly mounted **in the passenger compartment**. Cosmetic modifications allowed (addition of full range speakers for sound quality purposes, painting of trim pieces, etc.). All OEM panels and components, including dashboards, forward of **in the passenger compartment** in the vehicle must remain OEM stock and in their factory mounted location, with the exception of the front seats which may be removed for testing. **Any OEM rear passenger seats (excluding seats in cargo areas) must remain mounted in OEM locations in the vehicle during testing. In the cargo area, any panel modifications can be made.** Small OEM trim pieces, no longer than 8 inches (door handle trim rings, plastic trim to cover screws, sail panels, etc) are not required. Kick panels and door sills are required. **NOTE:** Factory door panels cannot be completely covered with the speaker pod build out. The pod must be attached to the existing door panel and only large enough to house the speaker. Speaker pod build outs designed for the sole purpose of increasing SPL are not allowed.
6. No sheet metal in the vehicle can be modified so as to increase the SPL level of the vehicle. All sheet metal used by the manufacturer to build the vehicle must remain intact and unaltered, with the following exceptions; door panel build outs and kick pods built to house operational speakers the purpose of increasing sound quality only and/or panel modifications for cosmetic purposes will be allowed.
7. Panels or baffles designed to increase SPL, whether attached to the vehicle or enclosure, cannot be mounted in the vehicle interior forward of the cargo area of the vehicle.
8. The vehicle must have the factory OEM dashboard in place, intact and unmodified. All accessories/gauges/switches in the dashboard must remain functional. The only additions allowed to an OEM dashboard are the painting of "snap in" panels on the dashboard and speakers for improving sound quality only. **EXCEPTION:** Custom built dashboards and consoles in custom show vehicles, designed and built purely for cosmetic purposes, may be allowed in the class as long as they maintain dimensions similar to the OEM dashboard or console. It is at the Judge's discretion to determine whether the dashboard was built for cosmetic or SPL purposes; the Judge's decision will be final.
9. **Front** seats and steering wheel (if removable) may be removed when competing, but must be in vehicle when entering and exiting the lanes.
10. **One (1) internal brace (pole) is allowed in the passenger compartment for the purposes of strengthening integrity of the vehicle. The brace cannot be any larger than 2.25 square inches (1.75" round or 1.5" X 1.5" square). Brace must be attached at both ends and cannot impede the proper mounting of the measuring device or seats. No other supports, poles or braces are allowed in the passenger compartment.**
11. Floor and wheel well modifications are not allowed.
12. Battery 'boxes' or "racks" underneath vehicle are not allowed.
13. No other additional brackets or holders may be attached to the outside of the vehicle for the purpose of housing additional equipment of any type. The vehicle must maintain an OEM factory look on the complete outside.
14. All equipment must be mounted in the OEM cargo area of the vehicle. **EXCEPTION: SUVs and minivans with rear captains seats may mount the amplifiers and batteries in a center console behind the front row seats.**
15. Walls are not allowed.

# CLASS 3/FLYWEIGHT (Trunk/Pickup, Hatchback/Wagon/SUV Minivan Divisions)

## EQUIPMENT CRITERIA

All equipment must be commercially available and can not be modified in any way.

### Source Units

- External source units are allowed. A source unit in the OEM location is not required.

### Amplifiers

- There are no minimum or maximum requirements for amplifiers.
- Unlimited amplifier power

### Speakers

- For Bass Boxing, if **external** speakers are used, the system must have a minimum of 50 square inches of full range speaker. Coax, component, horns or pro audio speakers are allowed.

### Subwoofers

- All subwoofers and subwoofer enclosures must be mounted in the OEM cargo area of the vehicle. Speakers and/or subwoofers mounted in the interior of the vehicle, installed with the intent of increasing SPL levels below 100 Hz, will be deemed as part of the SPL system and the vehicle will be reclassified to a higher Class.

### Batteries

- Unlimited amount of batteries allowed. Super caps are allowed but must be mounted within the cargo area.
- A battery is not required in the factory location. Batteries must be mounted in cargo area or engine compartment. **SUVs and minivans with rear captains seats may mount the amplifiers and batteries in a center console behind the front row seats.**
- Batteries must be a standard automotive 12 volt battery. Lithium based batteries are allowed.
- Batteries must be commercially available through standard retail channels (i.e. auto supply store)

### Alternator

- Three (3) alternators are allowed. One must be mounted in factory location.
- The vehicle's OEM factory style alternator can be upgraded from its original OEM factory output only. Larger alternators in physical size and/or shape are not allowed.
- Outboard adjustable voltage regulators on alternators are allowed, however the controls for the voltage regulator must be mounted in an accessible location while operating the system, for safety reasons.

### Voltage

- Maximum voltage allowed is 15.5 volts (engine running).

### Wiring/Fusing

- Unlimited runs of wire (+ or -) are allowed.
- IASCA strongly recommends that all wiring be fused at the main power source. **If the vehicle and system are not properly fused**, competitors **must** have an A-B-C rated fire extinguisher with the vehicle while competing in the lanes.

### Sound deadening (or dampening) materials

- Sound deadening (or dampening) may be used behind or inside any factory OEM panels forward of the **cargo area**, so long as the factory panel remains intact, unaltered and in its original factory OEM location and does not impede the proper operation of any of the vehicle functions. There can be no external visible evidence of the sound deadening (pieces of sound deadening material sticking out from the panels).
- **"Stiffening"** of panels **forward of the cargo area** is **not** allowed; competitors are not allowed to reinforce panels forward of the **cargo area** with anything other than traditional sound deadening materials available from retail car audio dealers (See "Stiffening" in Glossary of Terms).
- Sound deadening or reinforcement materials (stiffening) may be used anywhere on any panels **in the cargo area**.

## ADVANCED/LIGHTWEIGHT/WELTERWEIGHT/MIDDLEWEIGHT/HEAVYWEIGHT

- **Advanced No Wall 1 (IdBL)/Lightweight 1 (Bass Boxing)** - No Wall - 1 to 750 square inches of cone area
- **Advanced No Wall 2 (IdBL)/Lightweight 2 (Bass Boxing)** - No Wall - 751+ square inches of cone area/No Wall pick-up truck cut throughs
- **Advanced 1 (IdBL)/Welterweight (Bass Boxing)** - 1 to 750 square inches of cone area
- **Advanced 2 (IdBL)/Middleweight (Bass Boxing)** - 751 to 1400 square inches of cone area
- **Advanced 3 (IdBL)/Heavyweight (Bass Boxing)** - **unlimited** cone area

### COMPETITOR CRITERIA

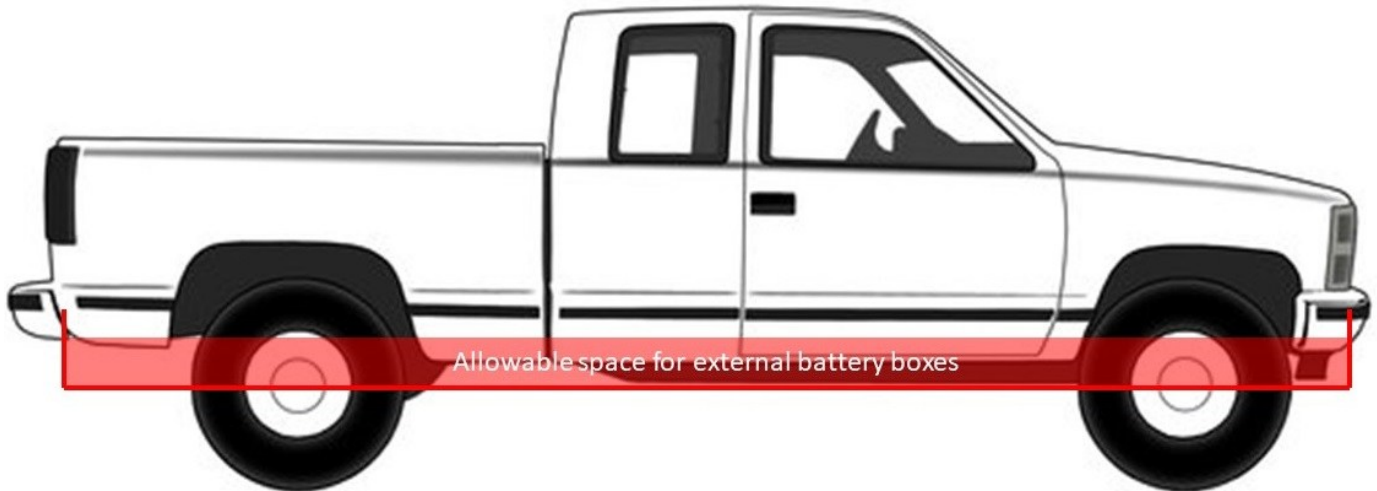
- Open to all competitors

### VEHICLE CRITERIA

1. **Any modification** to a vehicle that is not covered in this section will be considered illegal in this division.
2. All OEM factory windows/glass must be retained and cannot be replaced with any transparent substitute material, forward of the "B" pillar. Double layered windshields are allowed as long as they are the same specification as OEM.
3. OEM stock interior:
  - **Advanced No Wall 1 & 2 and Advanced 1 & 2**—OEM stock interior, forward of the "B" pillar. No interior panels or sheet metal in the vehicle, forward of the "B" pillar, can be externally modified. All sheet metal, steel, plastic, wood and any other materials, forward of the "B" pillar, used by the manufacturer to build the vehicle must remain intact and unaltered, with the following exceptions; door panel build outs and kick pods built to house operational speakers for the purpose of increasing sound quality only and, panel modifications for cosmetic purposes only. Small OEM trim pieces, no longer than 8 inches (door handle trim rings, plastic trim to cover screws, sail panels, etc) and windshield visors are not required. Kick panels and door sills are required. **Exception: Speaker pod build outs** are allowed and can house any amount of speakers the competitor chooses to install in them.
  - **Advanced 3**—OEM stock interior panels, center console, carpet and headliner not required. Dashboard, seats, and steering wheel are required (see rule below)
4. Seats and steering wheel (if removable) may be removed when competing, but must be in vehicle when entering and exiting the lanes.
5. The vehicle must have the factory OEM dashboard in place, intact and unmodified. **All OEM gauges and switches in the dashboard must fit but are not required to be functional.** The only additions allowed to an OEM dashboard are the painting of "snap in" panels on the dashboard and speakers for improving sound quality only. **EXCEPTION:** Custom built dashboards in custom show vehicles, designed and built purely for cosmetic purposes, can be allowed in the class as long as they maintain dimensions similar to the OEM dashboard. It is at the Judge's discretion to determine whether the dashboard was built for cosmetic or SPL purposes; the Judge's decision will be final.
6. Aftermarket and/or custom center consoles are allowed, but said consoles must be securely mounted and functional. "Functional" means that the console must provide storage for accessories and/or house functional electronic equipment. If, in the opinion of the IASCA event official, the console is designed solely for the purpose of increasing SPL, they may reclassify the competitor to the Ultimate Division. Any aftermarket or custom console installed in an Advanced Division vehicle cannot extend past the bottom of the steering wheel. In the case of vehicles with tilt steering, the steering wheel will be positioned perpendicular to the steering column to take the measurement.
7. **Floor and wheel well modifications behind B pillar** - Floor modifications behind B pillar are allowed. Any floor modification cannot extend below the vehicle's body line. It is at the discretion of IASCA and/or the IASCA event official/s to determine the intent of the build outs/modifications; their decision will be final. Wheel well modifications are also allowed, provided they do not impede the proper movement of the vehicle on its axles and tires.

## ADVANCED/LIGHTWEIGHT/WELTERWEIGHT/MIDDLEWEIGHT/HEAVYWEIGHT

8. Competitors can build a battery box (rack) underneath the vehicle to house additional batteries. The battery box (or rack):
- At the battery box's lowest point, must sit above the plane of the center of the axles—or—above the body line of the vehicle (whichever is lowest).
  - Must not extend beyond the plane of the front body line or rear body line of the vehicle (measured at 90 degrees from the plane of the axle centers).
  - Cannot impede or remove any vehicle functions (i.e.: suspension).
  - Not have additional brackets or holders attached to the outside of the vehicle for the purpose of housing additional equipment of any type.



9. Subwoofers and enclosures must be mounted behind the vehicle's "B" pillar. Walls are allowed.
10. Panels or baffles designed to increase SPL, whether attached to the vehicle or enclosure, cannot be mounted in the vehicle interior forward of the B pillar.
11. One (1) internal brace is allowed forward of the vehicle's B pillar for the purposes of strengthening integrity of the vehicle. The brace cannot be any larger than 2.25 square inches (1.75" round or 1.5" X 1.5" square). Brace must be attached at both ends and cannot impede the proper mounting of the measuring device. The brace is allowed to extend behind the B pillar and is allowed to be attached to the enclosure. If brace is attached to enclosure, it will count towards the height measurement for determining whether it is a wall or no wall. No other brace, or part of any other brace, including mounting brackets, may be forward of the B pillar.
12. One (1) strap may be used around the exterior of the vehicle to help secure the doors.
13. Roof build downs and floor build ups, forward of the vehicle's "B" pillar, are not allowed in Advanced Division.
14. All external body panels (upper, sides, front and rear) must remain intact and unaltered from their factory OEM specs, with the exception of the addition of aftermarket body "kits" for cosmetic upgrade purposes only.
15. Competitors may use tape (duct tape, packing tape, etc.) to cover vents or openings on the inside of the vehicle, for the purposes of increasing SPL. Tape may also be used to seal windows as long as the sensor is visible to judges. The tape used cannot interfere with the sensor or its proper placement in the vehicle for judging.

## EQUIPMENT CRITERIA

All equipment must be commercially. Equipment used may be modified, but must still maintain its factory original "look".

### Source Units

- External source units are allowed. A source unit in the OEM location is not required.

### Amplifiers

- There are no minimum or maximum requirements for amplifiers.
- All bass generating amplifiers must be located behind the B pillar of the vehicle.

### Speakers

- For Bass Boxing, if external speakers are used, the system must have a minimum of 100 square inches of full range speaker. Coax, component, horns or pro audio speakers are allowed.

### Subwoofers

- All subwoofers and subwoofer enclosures must be mounted behind the leading edge of the vehicle's "B" pillar, so that no part of the subwoofer extends forward of the B pillar, including the surround. Speakers and/or subwoofers mounted in the interior of the vehicle, forward of the "B" pillar, installed with the intent of increasing SPL levels below 100 Hz, are not allowed.
- Pickup truck "cut throughs" from the bed of the truck into the cab are allowed in Advanced 1, 2, and 3.

### Batteries

- Unlimited amount of batteries allowed. Super caps are allowed but must be mounted within the cargo area.
- Lithium based batteries are allowed.
- A battery is not required in the factory location. Batteries must be mounted in engine compartment, cargo area or external battery bank specified below:
- External battery racks, designed to house additional batteries, are allowed (e.g. running board racks, bumper racks), provided the batteries are properly mounted and covered, and do not pose a hazard to the competitor, the judges or spectators. External roof racks are not allowed.

### Alternator

- Unlimited amount of alternators can be used. One must be mounted in factory location.
- If additional alternators are used, they must be mounted within the limitations of the OEM factory engine compartment of the vehicle. Competitors are not allowed to create an opening in any external body panel of the vehicle in order to accommodate additional alternators.
- Outboard adjustable voltage regulators on alternators are allowed, however the controls for the voltage regulator must be mounted in an accessible location while operating the system, for safety reasons.

### Voltage

- Maximum allowed voltage is 18.0 volts (engine running).

### Wiring

- Unlimited runs of wire (+ or -) are allowed.
- IASCA strongly recommends that all wiring be fused at the main power source. **If the vehicle and system are not properly fused**, competitors must have an A-B-C rated fire extinguisher with the vehicle while competing in the lanes.

### Sound deadening (or dampening) materials

- Sound deadening (or dampening) may be used behind or inside any factory OEM panels forward of the "B" pillar, so long as the factory panel remains intact, unaltered, in its original factory OEM location and does not impede the proper operation of any of the vehicle functions. There can be no external visible evidence of the sound deadening (pieces of sound deadening material sticking out from the panels).
- "**Stiffening**" or reinforcement of panels is allowed anywhere in the vehicle, and may be used behind or inside any factory OEM panels forward of the "B" pillar; competitors are allowed to reinforce panels anywhere in the vehicle with anything other than traditional sound deadening materials available from retail car audio dealers (See "Stiffening" in Glossary of Terms). Panels forward of the B pillar must maintain an OEM appearance.

# ULTIMATE DIVISION/NO HOLDS BARRED

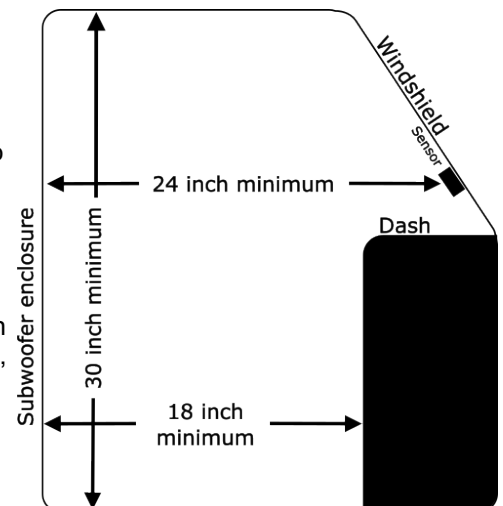
- **Ultimate (IdBL)/No Holds Barred (Bass Boxing) - unlimited cone area**

## COMPETITOR CRITERIA

- Open to all competitors

## VEHICLE CRITERIA

1. *Any modification* to a vehicle that is not covered in this section will be considered illegal in this division, until approved by IASCA Worldwide Inc.
2. Vehicles can be modified anywhere in the interior of the vehicle.
3. Vehicle interior door panel build outs are allowed in Ultimate Division competition. Interior door panel build outs may include an additional interior transparent glass and will be subject to the glass visibility measurements. Competitors may use additional latching mechanisms to secure doors during testing (straps, bolts, etc.).
4. All OEM factory windows forward of the vehicle's "B" pillar may be replaced with any transparent substitute material. The transparent material used to replace the factory OEM glass must maintain a minimum of 576 square inches of visibility in the windshield area, and a minimum of 140 square inches of visibility in each door glass area. The replacement material must closely approximate the same rake and angle of the original OEM glass in the vehicle, and be within the same area as the OEM glass location. All glass panels rearward of the vehicle's "B" pillar can be replaced with any transparent or non transparent material. The area of the windshield where the measuring device is mounted *must* be clear and allow viewing of the measuring device from the outside.
5. Competitors must provide an opening through the vehicle's body, glass or interior panels, a minimum of 1.125 inches in diameter, that can be properly sealed during testing, in order to pass the measuring device cable through. Grooves or gaps between a vehicle's door and door frame are not acceptable openings. The opening must have some type of seal or gasket to protect the measuring device cable from being cut and/or pinched, and to eliminate any chance of venting to the outside of the vehicle through the opening during testing. The measuring device cable must not pass through any electrical connections in or on the vehicle. *Exception:* Vehicles that have been reclassified to the Ultimate Division may be exempt from this rule, dependent upon the door frame and glass design of the vehicle.
6. Competitors may add a custom built dashboard in their vehicle. The dashboard height cannot extend any higher or lower than the top of the original OEM dashboard, or 3 inches above or below the base of the OEM windshield frame. "Base" in this reference means the part of the windshield frame that attaches to the firewall of the vehicle through the width of the vehicle at the joining point. It may run the complete width of the vehicle and extend inward to the interior of the vehicle, but it cannot exceed the height limitation set forth in this rule.
7. Competitors may add a custom center console in their vehicles. The console cannot extend past the top of the dashboard; it may vary in length and width, but it cannot exceed the height limitation set out in this rule.
8. Ultimate Division vehicles cannot have any partition and/or wall above the height of the dashboard, anywhere in the interior of the vehicle, that separates the driver and passenger compartments.
9. Subwoofers, enclosures (sub boxes), vents, ports or walls: The wall cannot pass forward of the B pillar. The wall cannot be any closer than 24 inches from the measuring device. This distance is measured from the point on the wall that protrudes the furthest (including speakers, surrounds, supports and braces) (see diagram).
10. All interior modifications must allow for two average sized adults (see previous rule) to sit comfortably in the interior of the vehicle (one on the driver's side and one on the passenger's side). Other than a standard seating position, like in a regular seat in a vehicle, the only other acceptable seating position for the passenger seat is according to the following: minimum 30 inches height, with minimum 18 inches from dash to seat back, across minimum 13 inches from door to center of vehicle (see diagram).
11. OEM factory door framing can be altered from the original OEM factory specifications for the purpose of strengthening the door frame and creating mounting points to attach the door. The door opening must remain the same size and the door must still function (swing open) similar to OEM with the exception of custom door hinges for show purposes (e.g. suicide doors, lambo doors).
12. Any additional framing and/or bracing used to support or strengthen any panel or replacement transparent material (window framing), must not interfere with the proper positioning of the measuring device or its placement jig.



## ULTIMATE/NO HOLDS BARRED

13. Floorboards in an Ultimate Division vehicle may be raised above the OEM factory door jamb.
14. Roof interiors may be lowered below the OEM factory door frame. Any “extensions” of the lowered roof fall within the guidelines set out for visibility into the interior of the vehicle; if a lowered roof line protrudes into the windshield or door glass area, it is considered in the calculation of total visibility to the interior of the vehicle
15. Vehicles can be modified to increase or decrease the length, width and/or height of the vehicle, deviating from the intent of the OEM factory body specifications of the vehicle, for the purposes of increasing SPL, so long as the vehicle meets all other criteria set forth and rules set forth for the Ultimate Division. This will include, but not limited to; stretching, widening, heightening, storage compartments on the roof, floor cut outs, non factory or aftermarket body panels, etc. All modifications to any Ultimate Division vehicle must still attempt to maintain an OEM factory “look”.
16. If a competitor uses any exterior panel to house any additional equipment (other than a head unit, speakers or processor), that equipment must be encased in some type of enclosure so that the equipment is not visible.  
Example: Batteries mounted on the roof of a vehicle must be mounted securely and have a cover over them so they are not visible or “out in the open”.
17. Competitors may use tape (duct tape, packing tape, etc.) to cover vents or openings on the inside of the vehicle, for the purposes of increasing SPL. Tape may also be used to seal windows as long as the sensor is visible to judges.  
The tape used cannot interfere with the sensor or its proper placement in the vehicle for judging.
18. All types of vehicles are allowed to compete in Ultimate Division.

## EQUIPMENT CRITERIA

### **Source Units**

- External source units are allowed. A source unit in the OEM location is not required.

### **Amplifiers**

- There are no minimum or maximum requirements for amplifiers.

### **Subwoofers/Speakers**

- For Bass Boxing, if external speakers are used, the system must have a minimum of 150 square inches of full range speaker. Coax, component or pro audio speakers are allowed.
- All bass generating subwoofers and enclosures must be located behind the B pillar of the vehicle.

### **Batteries**

- Unlimited amount of batteries and capacitors.

### **Alternator**

- Unlimited amount of alternators.

### **Voltage**

- Maximum allowed voltage is 18 volts.

### **Wiring**

- Unlimited runs of power wire (+ or -) are allowed from the front battery of the vehicle to the rear.
- IASCA strongly recommends that all wiring be fused at the main power source. ***If the vehicle and system are not properly fused***, competitors ***must*** have an A-B-C rated fire extinguisher with the vehicle while competing in the lanes.

## STREET DIVISION (OPTIONAL IDBL)

The intent of Street is to give newcomers and local competitors a place to compete without the worry of having seasoned *IdBL* veterans coming in and taking all the "top spots". It allows newcomers and local competitors to compete in *IASCA IdBL* competition and learn what *IdBL* is all about.

This class will only be offered when the event organizer has resources to offer this division. When this division is not offered, Street competitors will be classified as Class 1 but will not lose eligibility for Street for the remainder of the year. Street will not be offered at championship events but Street competitors will be moved to Class 1.

### Street is broken down into the following cone area rating:

- **1 to 240 sq. in.** - No Wall Division (4-8s, 3-10s ,2-12S, 1-15 inch subwoofer/s)

## COMPETITOR CRITERIA

- Cannot have competed in any SPL competition in any sanctioned organization in prior years (must be first year competitor)
- Cannot have competed in any higher IdBL class.
- Cannot receive, or have received, any schooling or accredited education in the mobile electronics industry (e.g. car audio installation schools).
- Cannot derive, or have derived, any income or support from any facet of the mobile electronics industry or any of its affiliations, including but not limited to, sponsorship or the sales, installation, manufacturing, design, testing or engineering of any autosound products.
- Cannot derive, or have derived, any income or support from the publishers of any autosound magazine including but not limited to print and internet publications.
- Cannot derive, or have derived, any income or support from the participation in or arranging of autosound and/or similar style competitions, sanctioned or unsanctioned.
- Cannot be part of a manufacturer competition team.

## VEHICLE CRITERIA

1. Vehicle must not have been used in any SPL competition in any sanctioned organization in prior years (must be first year vehicle).
2. Vehicle must not have competed in any higher IdBL class.
3. **Any modification** to a vehicle that is **not** covered in this section will be considered illegal for the division and the vehicle will be reclassified to a higher Class/Division.
4. Vehicle must be tagged (licensed) and insured for use on the road. If the vehicle is not tagged (licensed) or insured, the vehicle and competitor will be reclassified to a higher Class/Division.
5. **OEM stock interior, except for speaker build outs, kick panels.** All interior panels must be in place and properly mounted. **Cosmetic** modifications allowed (addition of full range speakers for sound quality purposes, painting of trim pieces, etc.). Small OEM trim pieces, no longer than 8 inches (door handle trim rings, plastic trim to cover screws, sail panels, etc) are not required. Kick panels and door sills are required.
6. No panels or sheet metal in the vehicle can be modified so as to increase the SPL level of the vehicle. All sheet metal, steel, plastic, wood and any other materials used by the manufacturer to build the vehicle must remain intact and unaltered, with the following exceptions; door panel build outs and kick pods built to house operational speakers the purpose of increasing sound quality only and/or panel modifications for cosmetic purposes will be allowed. Build outs designed for the purpose of increasing SPL will not be allowed.
7. OEM covering (carpeting) in the trunk or hatch or interior area (e.g. carpet, panels, etc.) must remain intact in the vehicle during testing. OEM factory carpeting or covering *may* be replaced with an aftermarket equivalent that approximates an OEM factory appearance.
8. All seats must remain in the vehicle while competing.
9. All equipment must be mounted in the OEM cargo area of the vehicle.
10. Panels or baffles designed to increase SPL, whether attached to the vehicle or enclosure, cannot be mounted in the vehicle interior.
11. All OEM panels and components, including dashboards, must remain OEM stock and in their factory mounted location. All accessories/gauges/switches in the dashboard must remain functional. The only additions allowed to an OEM dashboard are speakers for improving sound quality only.
12. Supports, poles or braces are not allowed within the vehicle interior.

# STREET DIVISION (OPTIONAL IDBL)

## EQUIPMENT CRITERIA

All equipment must be commercially available and can not be modified in any way.

### Source Units

- The source unit must be mounted in the factory OEM radio location of the vehicle. Source units may be operated from outside the vehicle by remote control. Source Units cannot be removed from their mounted location.

### Amplifiers

- Maximum one (1) amplifier *per pair* of subwoofers is allowed.
- Maximum allowed amplifier power output 1,000 watts RMS
- Power will be verified using a clamp meter, digital multimeter or the Term-Lab Magnum clamping system while vehicle is competing in the lane. **If the power measurement cannot be properly made during the SPL measurement (e.g. software error, lack of wire accessibility, measurement not responding as expected, etc.), a reclassification is required to a class that does not require an amplifier power limit.**
- One amplifier means that all amplifier components must be encased within one heatsink. "Strapping" multiple amplifiers together as "one" is not considered as one amplifier.

### Subwoofers/Speakers

- Single, dual, and quad coil subwoofers are allowed
- All subwoofers and subwoofer enclosures must be mounted in the OEM cargo area of the vehicle. Speakers and/or subwoofers mounted in the interior of the vehicle, installed with the intent of increasing SPL levels below 100 Hz, will be deemed as part of the SPL system and the vehicle will be reclassified to a higher Class.

### Batteries

- One battery must be mounted in the factory location and must fit within the parameters of the unmodified OEM battery tray. No additional batteries.
- Batteries must be a standard automotive 12 volt battery. Lithium based batteries are allowed.
- Batteries must be commercially available through standard retail channels (i.e. auto supply store)

### Capacitors

- Up to 10 farads of capacitance is allowed. Competitors may use a single 10 farad capacitor or a multiple of capacitors totaling 10 farads.

### Alternator

- One (1) alternator is allowed. Must be mounted in factory location.
- The vehicle's OEM factory style alternator can be upgraded from its original OEM factory output only. Larger alternators in physical size and/or shape are not allowed.
- Outboard adjustable voltage regulators on alternators are allowed, however the controls for the voltage regulator must be mounted in an accessible location while operating the system, for safety reasons.

### Voltage

- Maximum voltage allowed is 15.5 volts (engine running).

### Wiring/Fusing

- Unlimited runs of wire (+ or -) are allowed from the front battery of the vehicle to the rear.
- IASCA strongly recommends that all wiring be fused at the main power source. **If the vehicle and system are not properly fused**, competitors **must** have an A-B-C rated fire extinguisher with the vehicle while competing in the lanes.

### Sound deadening (or dampening) materials

- Sound deadening (or dampening) materials may be used **behind or inside** any factory OEM panels, so long as the factory panel remains intact, unaltered and in its original factory OEM location and does not impede the proper operation of any of the vehicle functions.
- **"Stiffening"** of panels is not allowed; competitors are not allowed to reinforce panels with anything other than traditional sound deadening materials available from retail car audio dealers (See "Stiffening" in Glossary of Terms).

## SPECIALTY DIVISION (OPTIONAL BASS BOXING)

***This Division is designed mainly for younger and special needs people to give them a “fun” class to compete in and learn about competition.***

**NOTE:** This Class/Division is not offered at all events. Check with your event host before going to a competition; do not assume the promoter will offer the class.

The Division will not be offered at INAC Finals.

### COMPETITOR CRITERIA

- Open to all

### VEHICLE CRITERIA

- **Only open to specialty type vehicles not typically designed to be driven on the road, or be roadworthy, such as:**
  - Golf Carts
  - Powerwheels
  - ATVs

### EQUIPMENT CRITERIA

All equipment must be commercially available and can not be modified in any way.

#### **Amplifiers**

- One (1) amplifier **per pair** of subwoofers is allowed.

#### **Speakers**

- A minimum of 50 square inches of full range speaker cone area. Coax, component, horns or pro audio speakers are allowed.

#### **Subwoofers**

- Single or dual voice coil subwoofers only; “Quad coil” subs are not allowed. Maximum of two (2) 10 inch subs allowed

#### **Batteries**

- Two (2) batteries allowed, max 800 cubic inches each.

#### **Voltage**

- Maximum voltage allowed is 16.0 volts.

#### **Wiring/Fusing**

- System **must** be fused, maximum 200 amp fuse allowed. Fuse/fuseholder must be mounted within 18 inches of the vehicle’s main battery.
- One run of 1/0 gauge wire maximum

## GENERAL DEMO BOXING RULES

# DEMO BOXING

## DEMO BOXING - FORMAT OVERVIEW

**IASCA DEMO BOXING** is our newest type of SPL competition that blends Bass Boxing and current trends in SPL demo community. In Demo Boxing, there are only 2 classes.

## DEMO BOXING PROCEDURE

### **QUALIFYING ROUND**

The **QUALIFYING ROUND** will determine the top two competitors in each Division; ***only the top two competitors in each Division will move on to the final round.*** **NOTE:** Event hosts have the option of offering as many qualifying round runs as they want to; some event hosts may only offer one round due to time constraints.

**HOW TO QUALIFY** - The competitor has the option of whether they wish to have any of the vehicle's doors or windows fully or partially open, or closed during qualifying (and must stay in that position for the entire run). The competitor has two minutes from the time they enter the competition lane to get ready to compete. The round lasts 30 seconds during which time the competitor's highest **average** SPL score will be recorded.

When all qualifying is complete, only the top two competitors with the *highest average SPL qualifying score* will move on to compete against each other in the Championship Fight.

### **The CHAMPIONSHIP FIGHT**

The Championship Fight consists of just one 90 second round where the top two qualifiers go against each other for the Title of EVENT CHAMPION. The top qualifier gets the choice of who goes first in the final round. The competitor has the option of whether they wish to have any of the vehicle's doors or windows fully or partially open, or closed and can be different than their qualifying run (but doors and windows must stay in that position for the entire run).

The Champion (winner) will be the competitor with the highest average score for the championship fight (final round).

## **GENERAL DEMO BOXING RULES**

All Demo Boxing general rules are the same as Bass Boxing with the following exception:

1. The frequency cap for **Demo Boxing** competition is set at 30 Hz (**Bass Boxing** is set to 100 Hz). Any round that has a peak frequency higher than 30 Hz during the run will result in a score of 0 for that run.
2. Competitors may choose to have any or all windows or doors partially or fully open. Hearing protection rules still apply.
3. The top 2 qualifiers in each division will compete in one final round of 90 seconds.
4. Music CDs with test tones, sweeps, bass drops or bass bombs embedded in the music background may be allowed if the tone is not constant and the duration of each tone **does not exceed ten seconds** in length; check with your IASCA Official to see if the music you wish to play will be allowed.

### **DEMO NO WALL DIVISION**

**Any competitors and vehicles that fit these Bass Boxing Division criteria will be in this class:**

- Bantamweight, Bantamweight Trunk/Pickup
- Cruiserweight, Cruiserweight Trunk/Pickup
- Flyweight, Flyweight Trunk/Pickup
- Lightweight1, Lightweight 2

There is no amplifier power limit (no clamping).

### **DEMO WALL DIVISION**

**Any competitors and vehicles that fit these Bass Boxing Division criteria will be in this class:**

- Welterweight
- Middleweight
- Heavyweight

### **DEMO ULTIMATE DIVISION**

**Any competitors and vehicles that fit these Bass Boxing Division criteria will be in this class:**

- No Holds Barred

# GLOSSARY OF TERMS

The following are terms used by IASCA and its judges.  
This section is to help those unfamiliar with the terms used to better understand them.

**Automotive** - The term “automotive” refers to any mass produced, commercially available component, designed for use in a motor vehicle designed and built to travel on roads.

**Baffle/s** - Panels built, or created specifically, to redirect air flow, or enhance the performance characteristics of a sound system, its components or installation.

**Battery** - A “battery” (or ‘batteries’) by definition consists of two or more cells connected in series or parallel, enclosed in a container, but the term is generally used for a *single cell*. A cell consists of a single **negative electrode**, an **electrolyte** (which conducts ions), a **separator** (also an ion conductor) and a single **positive electrode**. “Custom made” multi cell batteries **not** made by a manufacturer that are not commercially available do not fit the requirement and are not allowed in IASCA SPL competition. IASCA’s definition of a battery follows this description, however for competition use, the ‘battery’ must be a standard, commercially available automotive type battery with one positive and one negative electrode, regardless of the number of cells.

**Birth Sheet** - A ‘birth sheet’ is a power specification sheet for one particular piece of equipment within a model line. It usually comes with amplifiers stating the exact output of that particular amplifier, not the whole model line. It is not to be confused with the “specification sheet” (or spec sheet) for all amplifiers with that model number (see ‘specification sheet’ on next page).

**Blockers** - People (Team Members) used to “block” a door opening in an effort to increase the SPL generated by the vehicle.

**Cargo area** - The common area in a vehicle used to store cargo. In a car, the cargo area would be referred to as the trunk, or boot. For clarification purposes; in the case of sedans and coupes, the OEM cargo area is considered the trunk of the vehicle. For SUV’s and minivans, the cargo area is considered as the area directly behind (**the vertical plane behind the second row of seating**) and underneath the second row of seating in the vehicle. If the vehicle is equipped with a third row (or more) of seating, it will not affect the positioning of the enclosure so long as the enclosure remains behind the second row of seating. Third row (or more) seating only may be removed from the vehicle for competition, but the second row seating must remain intact and securely fastened in the vehicle (emulates a 4-5 passenger vehicle). There is an exception for pickup trucks, see General Rules for details.

**Commercially Available** - The term refers to how components used in competition must be available to the general public for sale at a retail level. Any component used in competition must be available to the general public through standard retail outlets or online retailers. If a component is only available to a select group of individuals, where access to the product is disallowed to the general public, it will not be deemed legal in IASCA competition.

**Custom Made** - Any item or component used in the construction of a competition vehicle using materials and the skill of the builder to create said item or component. Building custom made items or components is generally encouraged by IASCA to allow builders to showcase their skills, however certain components within the rule book that state they “must be commercially available” must be purchased through standard retail channels and cannot be custom made.

**Driver’s seat** - In IASCA competition, the term refers to the main seat used to operate the vehicle in normal driving conditions. It is the seat immediately behind the vehicle’s steering wheel with access to the gas and brake pedals.

**Enclosure** - More commonly referred to as a “sub box” or “box”, the enclosure is the fabricated “box” that houses the subwoofers.

**Factory or OEM** - OEM is an abbreviation for “Original Equipment Manufacturer”, referring to both the automotive and mobile electronics industries, for the purposes of these rules. When OEM is referred to through this text, it signifies the original equipment the vehicle or components came with from the factory when it was originally assembled.

## GLOSSARY OF TERMS

**Full Range Music - Full Range** music is the representation of all musical frequencies in the sound spectrum. In regular terms, this means that the bass, mid bass, midrange and high frequency levels are being played at the same output level, evenly represented.

**Mounted Properly and Securely** - This refers to any vehicle or system components that have been added to the vehicle. "Properly" means the use of proper materials to mount a component (**example** - using a proper battery tie down to hold a battery in place, not bungee cords, rope, cable ties, etc.). "Securely" means that the component being mounted does not move loosely in its position (**example** - using screws in the proper mounting holes for an amplifier and screwing them into a solid piece of material in the vehicle, not Velcro across the bottom of the amp stuck to the floor carpet).

**Pillars** - The posts that hold up the roof of the vehicle. Pillars are referenced from front to rear alphabetically; the front pillars at the windshield are commonly referred to as the "A" pillars, the next set of pillars rearward are referred to as the "B" pillars and so on.

**Road (or Roadway)** - A road is a thoroughfare, route, or way on land between two places which has been paved or otherwise improved to allow travel by motor vehicle. Roads consist of one, or sometimes two, roadways each with one or more lanes and also any associated and road verges. Roads that are available for use by the public may be referred to as public roads or highways.

**Specification Sheet (Spec Sheet)** - A specification sheet is a document that summarizes the performance and other technical characteristics of a product, machine or component (e.g., an electronic component) in sufficient detail to be used by a design engineer to integrate the component into a system. Typically, a spec sheet is created by the component manufacturer and begins with an introductory page describing the rest of the document, followed by listings of specific characteristics, with further information on the connectivity and performance of the devices. The specification sheet is a generalized document stating the performance of that specific model within the brand's product line, not the actual piece of equipment itself. Depending on the specific purpose, a spec sheet may offer an average value, a typical value, a typical range, engineering tolerances, or a nominal value. The type and source of data are usually stated on the spec sheet.

**Super Capacitors** - "Super Capacitors" are the latest technology on the market, where the product, when used in multiples, can act as a fast discharge battery. Typically, super capacitors have a voltage rating (usually 2.5, 2.6, 2.7 volts each), but they also have an extremely high farad rating. For rating purposes and the purposes of this rule book, these super capacitors will be rated by their farad rating, just like regular capacitors, and when connected together in multiples of 6 will be considered as a battery. If a competitor uses more than 6 of these super capacitors, they will be rated as multiple batteries (example: 6 super capacitors = 1 battery, 7 super capacitors = 2 batteries)

**Stiffening** - The practice of bracing the inside of a large sheet metal panel, such as a roof or door panel. Stiffening can be achieved by many means; examples of stiffening a panel include welding steel braces or adding thicker wood between the inner roof and headliner, caving in a roof panel and filling the depression with body filler, building a headliner out of thick wood and covering it with carpet or headliner material to emulate a headliner, etc. (Please note that not all examples of stiffening are legal in all classes please check with IASCA's judging staff to make sure.)

**Traditional Sound Deadening** - This term refers to the standard flexible petroleum based material produced to reduce vibration and resonance in metal panels. Known by many names such as Boom Mat, StP, Dynamat, Road Kill, etc, these products are available in sheets that adhere to the metal panel or in a spray can to apply to the panel.

**Vehicle** - The word "vehicle" is used as a general term referring to all motor powered cars, trucks, vans, SUV's, Crossovers and minivans. To qualify as a "vehicle" under IASCA's definition, the unit used to house the sound system being evaluated must have a motor that powers it, a transmission, an electrical system, a front and rear axle (one of which must be the driving axle and the other a steering axle), a steering wheel and a seat from which to control the unit while it is in motion. A trailer with a "tow vehicle" attached does not meet the definition; it must be one unit containing at minimum all of the above criteria.

**Wall** - Wall is a term used in reference to the type of subwoofer enclosure used in a vehicle. IASCA's definition of what constitutes a "wall" is any subwoofer enclosure that exceeds 25 inches in height, including all attached equipment, supports, panels and braces used to hold the enclosure in place.