# ATA Case Buyer's Guide

## Smart. Packaging. Fast.

Reduce Costs and Damage, Gain Efficiencies,
and Enjoy Flexibility with a True Packaging Partner

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# Introduction

ATA cases, also known as road cases, transit cases, or flight cases, can be used and reused many times (typically 100 or more uses), and provide optimal shipping protection and ease of use for fragile or sensitive items.They are designed and reinforced to meet rigorous standards of durability and stand up to air handling and trucking.

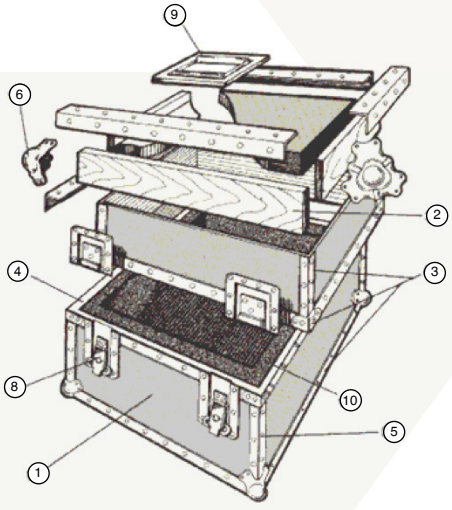
Larson Packaging Company (LPC) designs and manufactures custom ATA cases that exceed your most demanding specifications using only the highest quality materials and manufacturing techniques to ensure a superior enclosure that protects your equipment in transit and storage.

With casters, an ATA case becomes mobile and easy to handle without material handling equipment. An ATA case can be easily customized to meet your needs or application.

## *A History of the Original Design*

The name ATA case comes from the Air Transit Association 300 Spec which established packaging standards for air travel case design and testing to ensure protection of sensitive gear, parts, and avionics in flight. The basic principles of the ATA 300 Spec made a case water resistant, dust proof, impact and shock resistant, and subject to certain testing. The original characteristics of an ATA case included:

### *Original ATA 300 Requirements*




1 ABS or Fiberglass Laminate in choice of colors
2 ACX plywood or XLT Polypropylene (1/4", 3/8" or 1/2" as specified)
3 Aluminum edging and fittings
4 Aluminum tongue-in-groove valance
5 Split steel rivets driven through edging and plywood every 3 inches
6 Steel ball or stacking ball corners
7 Full length steel piano hinge
8 Recessed spring loaded twist latches
9 Recessed spring loaded handles with cushioned grip
10 Custom fitted polyester or polyethylene foam interiors

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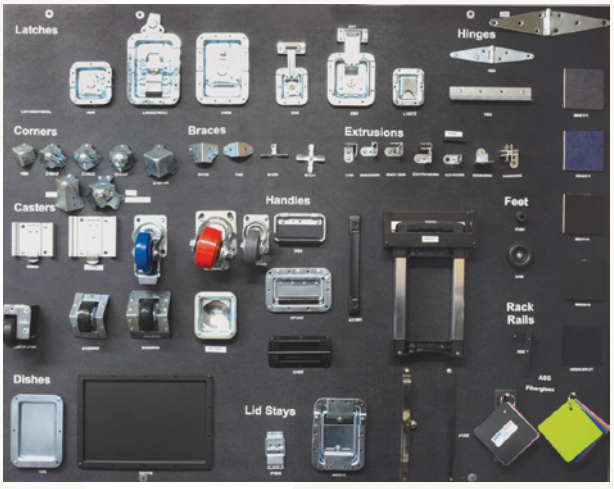
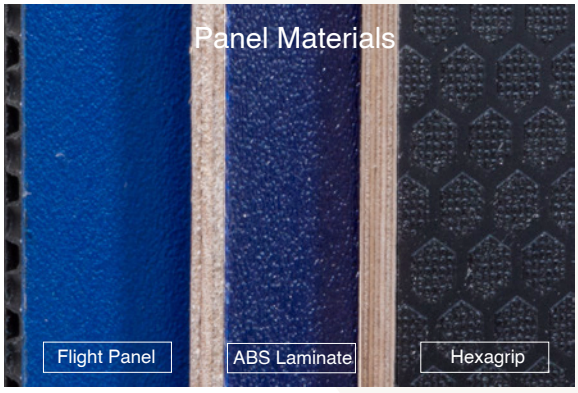
## *Improvements Evolved Over Time*

Over time, as better materials and engineered parts and extrusions became available, ATA cases evolved beyond the original specification. New ATA cases are consistent with the original guidelines, but the performance now exceeds the original spec, due to better manufacturing and design, and the use of superior components.




Several materials are available for the case panels which have different characteristics such as stiffness, puncture resistance, durability, weight and cost. ABS plastic laminate on plywood, the “industry standard”, is a combination of a single-sided plastic coating and varying quality ACX or solid-core hardwood or plywood. Hexagrip, LPC's standard panel, has a phenolic coating on both sides bonded to several layers of precision plywood. Hexagrip is favored because it is stiffer, more durable than the other panel material, and the coating does not bubble or peel off. FLight Panel™ or plastic corrugated is used when the additional weight of the case is very important.

Panels can be built from different thicknesses - ¼", ⅜", or ½".




## *Strengths of an ATA Case*

ATA cases are built to protect your sensitive, valuable, and unique equipment and gear in transit and during storage. ATA cases excel in reusability, durability, ease of use, speed of loading and unloading, and they can be customized. ATA cases are designed, engineered and manufactured to survive harsh transportation environments multiple times and take abuse. Whether you’re transporting your equipment to a customer, trade show, event, product demonstration, or replacing units or parts in the field for repair (FRUs or "field-replaceable units"), a custom ATA case will provide the best protection against vibration, movement and shock impact as well as ease logistics pain. This is because the weight, size, and handling of the equipment are considered when designing the case and the foam interior, so that the optimal materials and configuration can be selected to meet your unique application.

# Characteristics of an ATA Case

## *Protecting Your Investment*

Financial or time loss is a serious threat. Sensitive and valuable equipment was not intended to be shipped or moved repeatedly. A custom ATA case with an appropriate foam cushioning system and/or specialty blocking provides optimal protection against the costs of product damage during shipping or transit, including the resulting lost opportunity costs, time loss, repair costs, inconvenience and loss of reputation or brand damage. An ATA case is rugged with reinforced steel knuckled balls on the corners and strong exterior walls reinforced with aluminum extrusions. Because the panels and edges interlock, the resulting enclosure is structurally strong, especially for its weight.

ATA cases excel in reusability, durability, ease of use, speed of loading and unloading and they can be customized. This makes them superior, but more expensive than a box or a crate which can only be used for a few trips and has a more standard access. (see our publication Crate, ATA Case, or Box? Packaging Comparison Guide)

An ATA case is built to sustain repeated impacts without transmitting the force inside the case to the contents. Precisely engineered foam and supporting infrastructure absorbs impacts and vibrations, and braces your product from movement during transport. Not only is the foam cut to fit the equipment, but the weight and geometry determine the type, density, and amount of cushioning needed. ATA cases are designed to protect your valuable and unique items, but also to protect themselves from abuse, damage or failure.

## *Safe Handling in Transit*

Making your case easy to handle will simplify moving, storing and transporting your equipment and reduce the risk of damage. This is particularly important when your case will be handled by shipping carriers, or other parties who may not be aware of the care needed to handle your equipment. Recessed handles are standard and can be placed on any panel to facilitate handling and train the proper orientation of the case. Different types of casters can be added which are appropriate for the weight, mobility, and use of your equipment. The casters can include quick release plates, swivels, and brakes so that your case can be repaired quickly, maneuvered easily and stationary or locked in place when desired. For smaller cases, they can be designed with corner casters and telescoping handles like rolling luggage.

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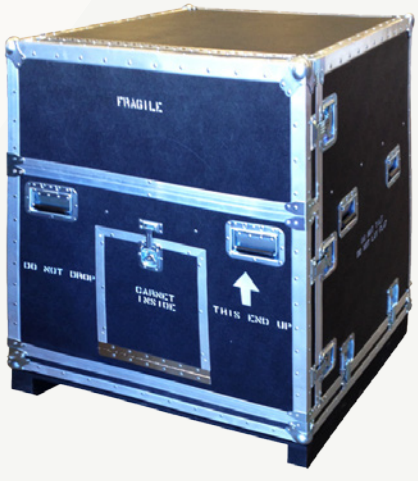
## *Reusable Packaging. Elegant, and Functional. Exceptional Value on a Cost-per-trip*

ATA cases combine design and materials that give them high structural integrity, good size to strength ratio, and durability for the purpose of reusability. They are ideal as the ultimate packaging medium. Not only are they an elegant solution, they are functional and adaptable to your unique needs. Finally, ATA cases can be very costeffective, especially when viewed on a cost-per-trip basis, rather than just acquisition cost. And when you add in the savings in time, shipping, safety and potential product loss, the value is impactful.

## *Everything Together. Ready for Action*

No matter your application, when using an ATA case, especially a custom case designed for your unique needs, whatever you are using them for will be close at hand and ready for use when you need it. The contents are protected in both storage and shipping, they are easily organized, accessible, and usable in the form you want when




ATA cases can be very cost effective, especially when viewed on a cost-per-trip basis, rather than just acquisition cost. And when you add in the savings in time, shipping, safety and potential product loss, the value is immense.

you want it (for example, demo a new device from the case, have all of your on-field supplies, uniforms or medical items organized and ready, or pull out electronics, lighting, instrumentation and just plug it in). Not only are the contents ready for action, but you are—not just burly logistics, forklift, maintenance and installation people. And they are speedy to load, unload and reload without looking for loose packaging, trying to figure out where everything fits, or having broken parts.

## *Securing and Storing*

One of the benefits of an ATA case is the ability to secure your equipment. An ATA case hides your valuable equipment from prying eyes, and also can be secured and/or locked. In the case of locking, because the case is almost indestructible, the equipment cannot be accessed without a key. When your equipment is stored it will be protected from the elements, and it is easy to inventory, and ensure that it is in the same state as when it was packed.

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## *Aesthetics, Organization, and Branding*

An ATA case with custom foam, dividers, drawers, and loading ramps presents a professional image. The packaging is the first thing that your customer experiences when they use your product, see a demo, or watch your setup. The fit and finish is an important reflection of your brand. ATA cases can also be fitted with custom drawers or compartments, to help organize your equipment. This is useful if your equipment contains many complex parts that only need to be partially accessed. Frequently, the order in which your equipment is accessed is important for assembly or use. There is a Japanese term *poka-yoke* which means to error-proof through great design. This is an important concept with ATA cases especially where repetitive consistency and loading/unloading speed is important.

# Custom ATA Case Options

## *Application*

Many options are available on ATA cases to meet your specific needs. The ability to pick and choose particular options is what makes a custom ATA case so versatile. Versus molded plastic cases, custom ATA cases are virtually unlimited in flexibility to meet your needs and wants. If you can imagine it, it can be built.

## *Styles*

When designing a case, start with the style or configuration which defines how you will use the case, how the equipment will be stored and accessed, and how the various lids and openings work. For example, will you top load your equipment or does the case need to pull away? Does it make sense to remove the lid(s) from the case entirely, or should it hinge open? If it opens on a hinge, should the lid be able to be locked in an open position? When your equipment needs to be handled from the bottom, a pullover or split shell lid will come completely off, exposing your entire equipment on the base of the case.

# Common Styles for ATA Cases

## *Hinged Lid*

This basic design is a trunk in which the lid flips open, is attached, and goods are loaded from the top. This style of case is good for bulk items that can be easily lifted such as tools, parts, etc. It is often used with specialty cut foam inserts. With casters and a telescoping handle, this case can be converted into rolling luggage.

## *Clamped Lid*

Similar to a hinged lid, but the lid (or door) comes completely off giving full access to the interior of the case and can provide positive pressure to hold down the items in the interior. Frequently, the removable lid can be converted into a separate or attached table. Sometimes mechanical or hydraulic lifts raise equipment up to usable height within the case.

## *Swing Door*

Swing door cases are vertical and typically are used for easy access wardrobe uses, on field support kits, or for rolling carts and medical devices. These can be configured with shelves, drawers, compartments or ramps.

## *Split Lid*

Split lid cases can be any proportion, giving flexibility. A 50/50 horizontal lid split is often used for large flat-panel plasma or LED monitors, or for heavier and bulky parts that would be difficult to extract from a typical clamped lid configuration.

Other types of splits are used to “encase” larger items where the doors or panels would be too large and bulky without breaking them apart. These can incorporate hinges on doors, ramps and also combine clamped lids to ease access and use of the case and contents.

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## Pull Over Lid

Pull over lid cases are similar to a clamped lid, but upside down. Typically, whatever is inside is operational or used on the base. So all you do is lift off the lid and go to work. Frequently used in music for amps or for demo units for mid-sized devices.

## Rack Mount Lid

Rack mount cases are used to mount electronics for AV, music, data processing or telecommunications equipment within the case. The electronics can be used while still mounted, and then packed up for travel and reuse. In a "shock mount" configuration, the rack floats on a cushion of foam within the case, protecting sensitive electronics from shock and vibration. Rack mount cases can have front and back doors for maximum access to both controls and cables.

## Combo Lid

A combo lid is the most versatile for ease of access, loading and unloading and protection. These cases can be designed for ergonomics and limited access to contents without opening the entire case or removing the contents. We make a premium flat panel monitor case in this fashion that makes loading and unloading a snap.

## Specialty Hinged Lid

Specialty hinged lid cases can be made with various angles to allow a device within to be displayed or used once the lid is opened.

## Lidmaker Door Option

Lidmaker is a specialty aluminum extrusion profile that serves as both the mate to the rest of the case, and the sides of the lid. This is lower profile and saves space.

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## Size and Exterior

Size is an important consideration, because an ATA case will take up space during transit, and storage. Consider whether your ATA case will ship cargo, commercial flight as freight or checked luggage, common carrier, or carried. Cargo and commercial flights and many carriers such as UPS, or FEDEX have size restrictions on the volume or dimensions of an enclosure. Will the cases be handled in a commercial or industrial environment or in more of an office type environment? It may be important that your ATA case fits in a vehicle through doorways or in a confined storage space. Cases are usually specified as interior and exterior dimensions. Precise measurements are important for the fabrication of your case. Remember that the amount of foam cushioning will affect the size and is determined by the weight and geometry of the equipment.

## Stacking

Frequently many ATA cases need to be stored or transported, and stacking them will save space. Options such as recessed metal dishes allow ATA cases to be stacked even if they have casters. The addition of rubber feet can also prevent a case from movement, resulting in less movement when in transit.

## Mobility

ATA cases are designed for durability, ease of handling, and high mobility. The placement of handles is a common way to move equipment that is not too heavy for one or two persons. Smaller cases can use corner casters and a telescoping handle like small luggage. If your equipment is very heavy, or needs to be handled by a single person, then various types of casters should be used. The casters come in a variety of sizes, built for rolling on different surfaces. They can include a brake to lock the case in place when necessary. The placement, size, and type of caster should be determined by an expert. Very large or heavy cases might use wood, HDPE plastic, or steel skids. ATA cases weigh less than wooden crates and are more customizable and mobile.

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## *Foam Interior Cushioning*

Foam cushioning combined with the rugged durability of an ATA case is what protects your equipment from damage. Foam braces your equipment inside the case, and provides cushioning against shock and vibration. An ATA case can be foam-lined, foam-filled, or contain slotted foam, in bars, or custom foam. Custom cut foam provides a precision fit ensuring that your equipment will not move around inside the case. The type, density, deflection, thickness and amount of foam needed is determined by your application. Some electronic devices may need anti-static foam. The most common foams are Mil-Spec polyethylene or polyester foams.

Foam cushioning has a profound impact on the reliability of your shipment. Custom foam braces your equipment from damage caused by movement and vibration.

## *Other Options*

Many other options are available to customize the interior and exterior of your ATA case for your specific needs. These include types of panel material, color, handles, latches, type of lid style, casters, and integrated ramps to load and unload cart-type devices. Regarding exterior panels, LPC has found that Hexagrip performs better than typical ABS plastic laminated on solid core or ACX plywood. HexaGrip is a film laminated plywood made of high quality birch and has a black phenolic coating on both sides and a pattern on the exterior. This high precision material makes excellent panels for cases because it is rigid, lightweight, and thin.

Organizational options include: drawers, interior doors, exterior doors, and shelving. Installing many organizational options allows for the assembly or repair of complex items using a variety of specialized equipment. Another configuration for an ATA case is the installation of standard racks for electronics which house mobile electronics and data equipment. The case itself could contain casters and a recessed power plug, along with vents so that the equipment could be operated from inside the case or with the case partially open.

# Custom ATA Cases in Action

## *Semiconductor Manufacturer*

A leading semiconductor manufacturer stores and transports equipment in custom ATA cases. The large vents are used to flush the equipment with gas so that the devices can be maintained inside the case during storage and transport.

## *Concert Tour, Events & A/V Electronics Rental*

A leading live event company needed a case to house 6 moving Chauvet lights along with associated cabling for their rental business. The lights were odd shaped and heavy at one end. LPC developed a case with custom foam for the lights as well as a divider and storage area for the accessories. The foam was precision CNC cut to match the two-tiered shape of the lights so they would be put in correctly each time, fit snuggly, and go in and out with ease. The case was made with casters and stacking cups to be stacked and stored when not in use.

## *Mobile Medical Device for Trade Shows*

The pictured custom ATA case provides mobile medical equipment. In the front, the equipment is packed in custom foam for easy access and assembly. In the rear, a cart with wheels can be rolled down a ramp and will hold the assembled equipment from the other side of the ATA case. The entire case can be handled and assembled by a single person of average strength in a short amount of time.

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# What to Look for in a Packaging Partner


Work with a supplier that has extensive experience designing and manufacturing custom cases and can understand and meet your needs. When designing a case, a packaging partner can bring many ideas about how the equipment could be accessed, and what configurations might be easier to handle or have some benefit for your unique equipment. A packaging partner should be able to provide different methods of packaging your equipment other than cases, such as boxes or crates if your packaging needs change or become more complex. You must consider the scale of your needs, your timeline, and whether you need a partner to work alongside you in your supply chain. Look for a packaging partner with extensive inventory to meet your demands on short notice.

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Make your life easier and make your packaging dream a reality—partner with Larson Packaging Company to get Smart. Packaging. Fast.



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