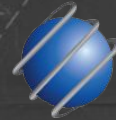
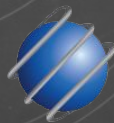




**The Professional's Guide To:**  
**Coil Cords**



**Everything you need to know about coil cords.**



MERIDIAN CABLE

# Forward

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## Coil Cords

Choosing the right cord for your product can seem overwhelming, there are so many options and choices to be made. When working with a manufacturer, they should guide you through the process to ensure that you have a high-quality product that meets your needs. This can be complicated and require several prototypes, but qualified manufacturers are willing to do this. The safest and most effective options aren't always the easiest to design, but at Meridian, quality is our top priority.

Aside from these tips on coil cords, we also invite you to take a look at [our blog](#) and the topics that we cover there. They are designed to give you the understanding and industry knowledge that you need when working closely with a manufacturer.

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# Chapter 1

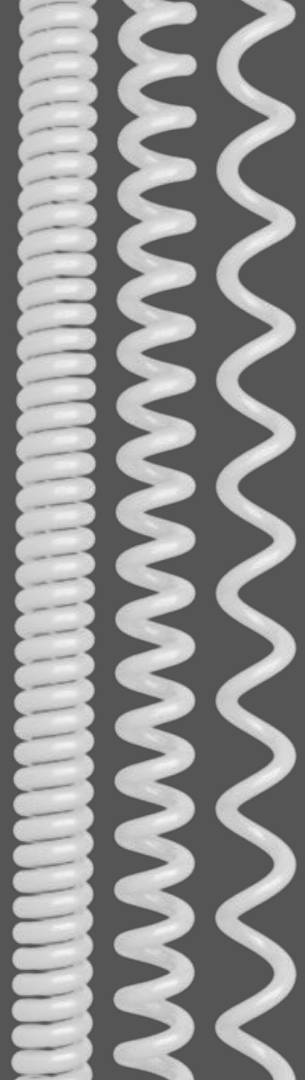
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**How do coil cords work and what are they used for?**

*Coiled cords have been with us for decades. Many of us have memories of landline phones, complete with one of these stretchable cords decorating the walls of our childhood homes. They became a staple of many different industries, especially telecommunications, but many people aren't aware of how useful [coil cords](#) can be.*

## How Are They Made?

Coiled cords are not just for landline phones. They actually have a long list of uses in many different industries. Unlike other kinds of cords, coiled cords are designed to be durable. This is done by carefully coating the wires in plastic insulation for protection. Those wires are then covered in a special plastic that can be made into a spring or coil. At this point, the cable is coiled and heat treated to achieve the desired result. Because of the special process by which the cords are coiled, the wires can stretch and retract as needed, without undue wear on the wires held inside.



## Customized Coil Cords

Coil cords are found in many different industries and can be made to almost any specification. Meridian Cable has been making customized coil cords for years. All of our cables are designed to meet the exact needs of the clients who requested them. Some of the specifications that are requested for these custom wires include:

- **Type:** Coil cords can carry more than telephone signals. Some construction equipment requires coiled electrical cords for safety. Other types of coil cords can carry internet signals, data, electricity, and a mixture of multiple kinds of wires.
- **Materials:** Coil cords are almost always made of flexible plastic coatings and conductible wires. Meridian can make coil cords from PU, PTEE, TPR, SVO and SJOW, depending on your needs. For outdoor environments, our specialty UV inhibitor technology can protect your coil cords from the sun's rays, extending the lifespan of coil cords that are used outside.
- **Performance:** Coil cords need to stand up to the harshest environments, which is why Meridian makes products under strict guidelines. Our coil cords can be built to withstand extreme temperatures, regular use, and are packed with high-quality wires that reliably deliver the signals or power you need.

# The Importance of Coil Cords

Coiled wires are an important part of the modern world for one major reason: safety. Because of their ability to stretch out and retract all on their own, these specialized cords help keep people and workplaces safer for everyone. They also help keep things running more efficiently, since coil cords can be specially made to carry multiple types of wires within the same cord. This not only saves space in busy or compact environments, but also keeps wires more organized.

At [Meridian Cable](#), we make custom coil cords that match your exact specifications. Whether it's a simple phone cord, or an industrial coil cord carrying both power and signals, our cords are built to make work sites, and life, safer and more efficient.





# Chapter 2

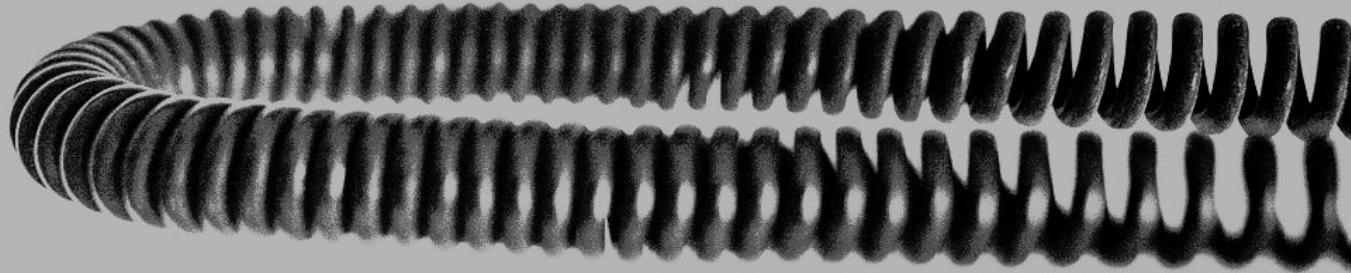
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**Why use a coil cord?**

*If you are old enough to remember non-cordless phones, then you are old enough to remember coil cords—but what are their practical uses in today's world?*

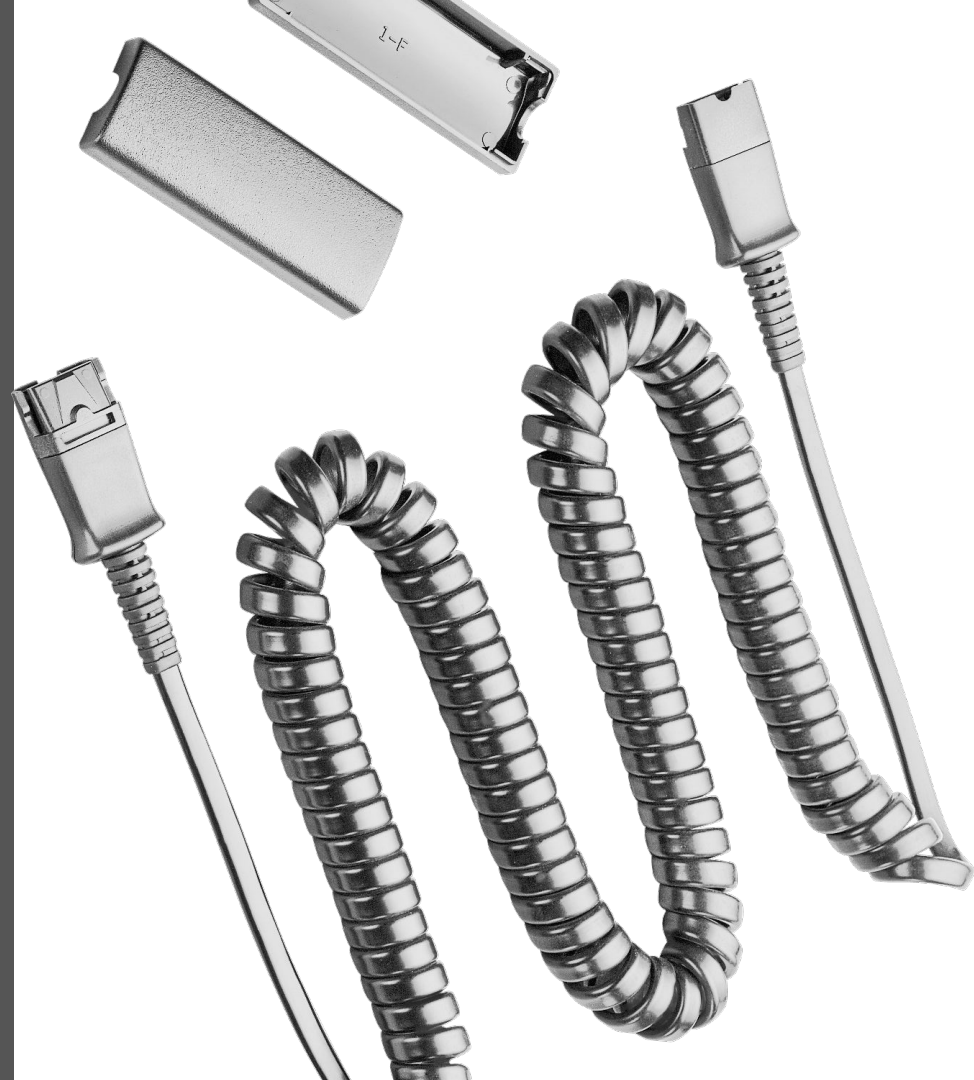
# What are the advantages of coil cords?

Coil cords are designed to be able to extend to a length that is up to several times greater than the at-rest length. That means you can stretch the cord further when you need to, and when you don't, it isn't going to tediously take up extra space. Their ability to self-retract makes them less of a hassle and easier to use. The design of the coil cord means the cord can have that extra flexibility, without putting stress on the wire inside. Purchasing a high-quality coil cord that is capable of withstanding daily wear and tear is an important part of the buying decision.



# What are the uses of coil cords?

The sky is the limit. Coil cords are most commonly recognized as phone cords, enabling you to move around without having to wind up a never-ending cord after each call. Coil cords are also commonly used for car chargers, and a lot of people like the practicality along with the aesthetic appeal of using coil cords for their electric guitars. However, there really are no limits to the potential uses of coil cords. While they are most recognizably used as simple plastic connectors, coil cords can be built to contain up to three dozen conductors, and they can be made to carry power, data, signal, or a combination.



# Chapter 3

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## The benefits of coil cords.

**Stretch-ability:** *One fantastic benefit of coiled cords is that they are extremely stretchable. They can be stretched to different lengths without losing their flexibility or breaking. In contrast, traditional wiring tends to break and eventually becomes nonfunctional when it's stretched, due to the crimps that form in the wires over time. [Coiled cords](#), on the other hand, are the Plastic Man of cords, capable of stretching to long lengths with no danger of breaking.*

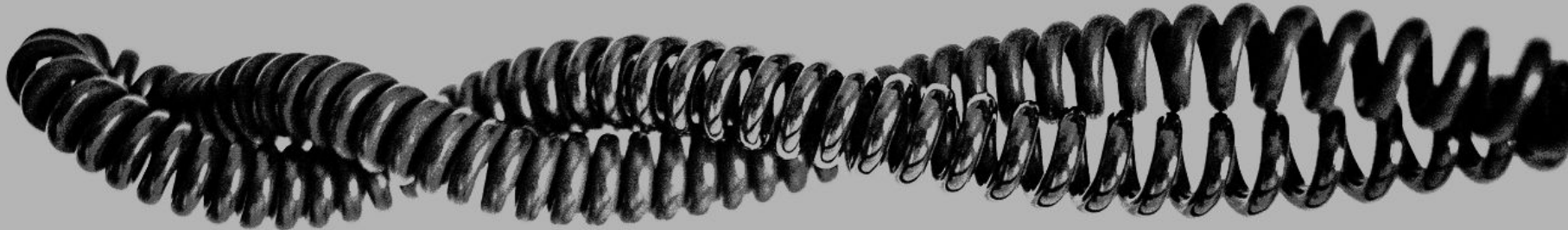
# Functional Technology

In an era of increasingly “smart” technology – cell phones, tablets, laptops, you name it – most people don’t think much about the value of cords. Yet cords are a fact of life; we regularly charge our phones or laptops, plug in our TVs, our blenders, our coffee-makers, and our hair dryers. Cords are such a feature of our daily lives that we don’t notice them until – you guessed it – they break or stop functioning.

Not only do coiled cords have a longer lifespan, but they also increase a person’s mobility, making them more versatile. Do you remember the days of (gulp) rotary phones? Most rotary phones featured coiled cords to make it easier for a person to talk on the phone while moving around in their kitchen or living room. While the rotary phone has long since gone the way of the dodo, these cords have continued to be useful and highly functional aspects of our lives. In fact, these types of cords can be found everywhere, from your workplace to your home, your library to your gym. In addition, many health professionals use equipment with coiled cords because these make for more durable and mobile equipment. In fact, if you’ve ever seen the inside of a mobile emergency vehicle, such as an ambulance, you’ll notice the presence of coiled cords precisely because they are more reliable, durable, and functional than a typical wire.

# Safety First

One of the main benefits of these cords is that they are retractable. They can be extended to various lengths and, when they're not in use, the coiled cord will pull back to its original length, retaining its shape, and minimizing tripping hazards. This is one of the reasons that these cords are so popular in the medical industry; they allow people to use equipment quickly and efficiently without having to worry about tangling wires or wrapping up the cord. Indeed, these cords are very popular in industries that use expensive and heavy equipment (medicine, engineering, mining, etc.), and they are also frequently used for electronics and digital devices. Because of their versatility, these cords come in a variety of lengths, thicknesses, and sizes.



# Chapter 4

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## Coil cord quality.

*Modern coiled cable is produced by numerous companies and although the products they make may look reliable, they definitely aren't. If you are in the market for [coiled cable](#), Meridian Cable Assemblies can help design and manufacture custom coil cords. If you are like us and want to ensure the highest quality cable design, you should consider a few factors such as the materials used, the cord's insulation and diameter.*

## You Need to Consider the Diameter of the Cable

The diameter, or size, of the coiled cable is very important when selecting which type to purchase. Many manufacturers and providers offer a variety of sizes to choose from, and you need to select the right size based on the cord's purpose. The diameter of the wire is crucial because it affects the amplitude and speed of the electrical current or data being transmitted through the cable.

## You Need to Consider the Cable's Quality

When you are looking to purchase coiled cable, you need to seriously evaluate the quality of the product. A lot of companies try to cut corners to increase their profits, leading to a lower quality product. You should do your research and make sure that the end product will stand the test of time. At Meridian Cable Assemblies, we take the time to produce the highest quality coiled cable for our customers. Quality is as important to us as it is to you.



# You Need to Consider the Materials Used to Create the Cable

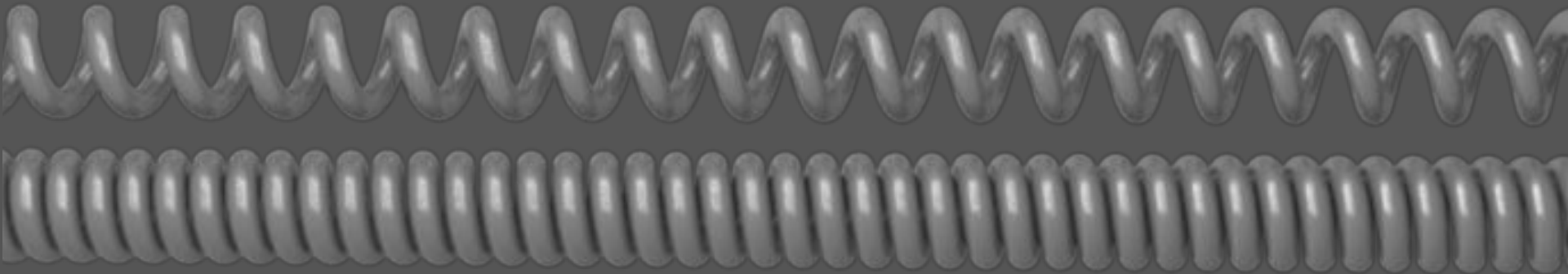
Quality materials are essential to producing high-quality cables. Meridian Cable Assemblies manufactures coiled cables in many materials to meet your specific needs. Whether your cord is intended for use in the medical industry, needs to work with large machinery or function in a home setting – we have the materials and know-how to produce it.



# You Need to Consider the Cable's Insulation

Another thing you need to think about when buying coiled cable is the insulating material inside of the cable. The insulation is essential because the interior of the cable is meant to conduct electricity. The insulation determines how quickly the electrical current and data will move through the cable. For a high quality conductor that saves energy – you need a good insulator.

If you are looking for a high quality, durable cable, [Meridian Cable Assemblies](#) manufactures coiled cable that uses the best materials and insulation to ensure that the connectivity of the cable is fast and reliable. We also produce cable in various sizes to be prepared for our customers' needs.



# Chapter 5

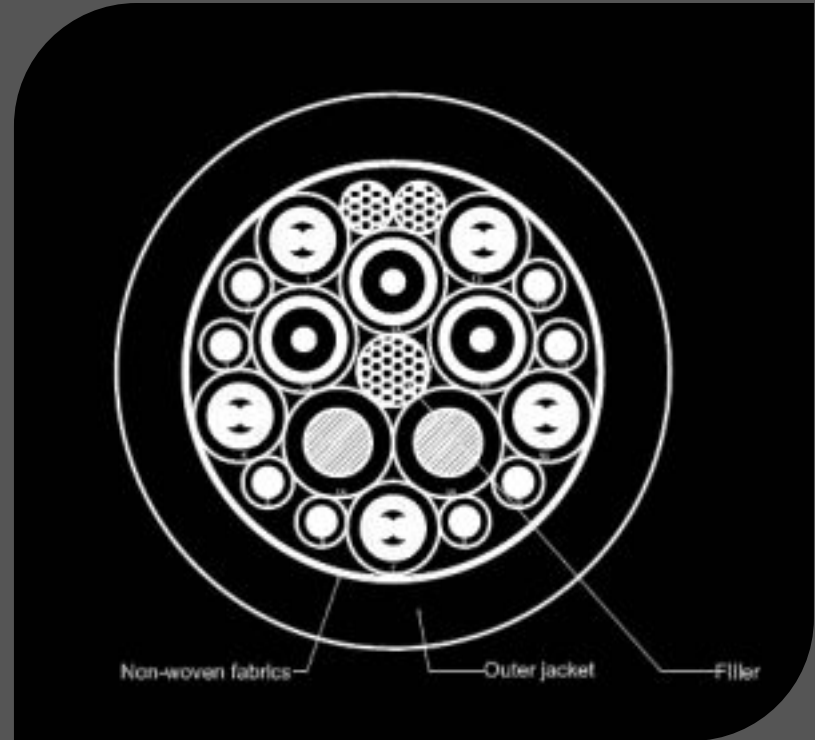
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**Coil cords designed to your specifications.**

*Many sensor arrays are complex, and often they need a complex cable connecting them to their processing equipment. This can be a challenge, but with the right equipment and years of experience – a design that meets the customer's needs can be created.*

## The Design

One of our customers came to us requesting a complex cable that had very specialized requirements. After gaining an understanding of the cord's use, we designed a cable with 8, 28awg conductors; 5, 34 awg Litz® wires; 2, 21 awg power conductors and 3, 0.060" diameter coaxial cable. Here is what the cable ended up looking like in cross-section:



## The Twist

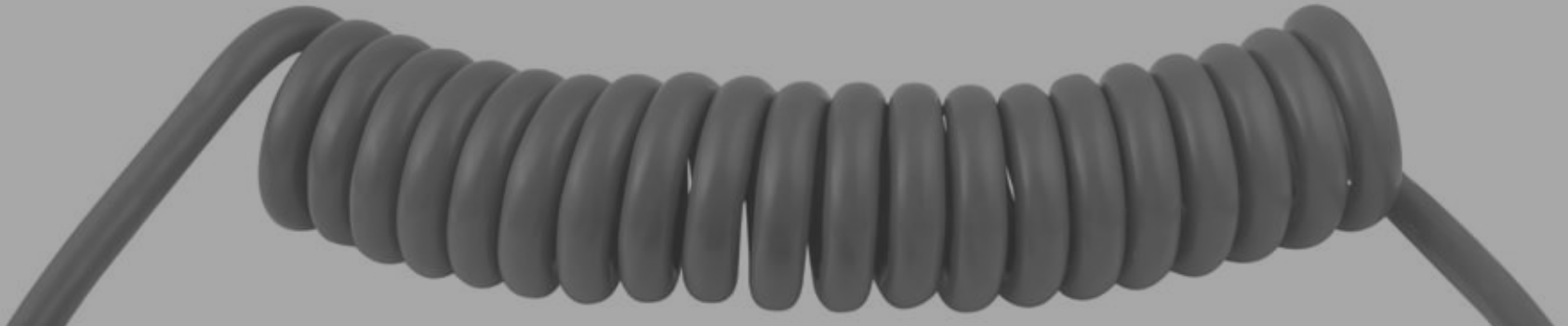
However, there was a twist (pun intended). The customer wanted this cable turned into a coil cord that could slide inside a telescoping tube with an inside diameter of less than an inch. Needless to say this isn't the run-of-the-mill coil cord design. First, we started with the custom cable. Our customer had very specific criteria for each of the conductors. We worked closely with our customer's engineers to understand what needed to happen, and shared our knowledge and experience with them to find a solution. This gave them choices in their design process.



# The Solution

We remained focused on the fact that this would eventually be a coil cord. We finalized the cable design, extruded the cable and then set about making the coil cords. The issue wasn't creating the cable, that was fairly easy. The bigger issue was making this complex cable retractable – a retractable cable solution that worked inside a one-inch pipe.

Throughout the cable design phase, we constantly made sure our customer knew the choices and impacts of the stranding, conductors, insulation materials, shielding options, jacketing materials and construction methods used. This allowed us to balance the electronic and mechanical performance. The final cable had an OD of only 0.291 inches, and when turned into a coil cord it did, in fact, work inside the pipe. A solution was found! Meridian Cable can design cables of varying complexity, and we would welcome sharing what we know with you. We have engineers that are happy to talk about wire and cable all day long. Your cables are unique; your vendor's solutions should be too.



# Steps to Maintain Quality Expectations

If you need versatile, strong, and extendable cords for your next project, we offer a quality selection of coiled cords in multiple lengths and materials. Whatever you do, you want to do it right; in order to do that you need quality and durable equipment. Contact us at [Meridian Cable Assemblies](#) today to discuss how these cords can help improve the safety and efficiency of your product.



# Conclusion

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Thanks for Reading!

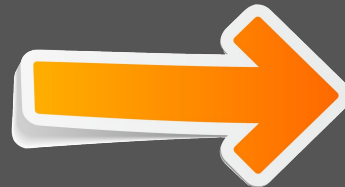
*Safety and functionality are the two main concerns for cords – no matter if they're intended for use at home, on a construction site, or in a hospital. We understand this, and work to ensure that every cable we produce meets your expectations. If you're looking for a manufacturer to produce cords that meet your rigorous standards while maintaining the safety and functionality of a coil cord, we'd be happy to discuss our various capabilities and designs with you.*





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[sales@meridiancableassemblies.com](mailto:sales@meridiancableassemblies.com)



**Need a Quote?**