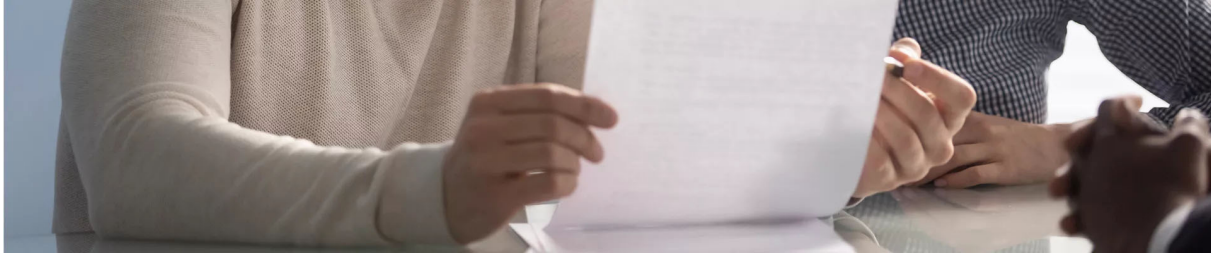


RG6 vs RG59: Which Should You Buy?

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RG6 vs RG59 seems to be a frequent comparison among the people buying **coaxial cable**. That's true. **RG6** and **RG59** cable are the two most commonly used coax cables. Which one should you choose? It depends on what you will use it for. Therefore, knowing the difference between RG6 and RG59 cable is important, which can help you make the right choice. What is the difference between RG6 and RG59 cable? Let New King tell you everything about coax RG6 vs RG59!

What Does RG Mean?

RG stands for Radio Guide, which is the model number of RF cable series originated from US military. Each single coaxial cable has different RG rating to distinguish different constructions and properties of the cable.

What Is RG6 Cable?

RG6 cable is one of the most common kinds of coaxial cable used for most residential and commercial indoor installation. It usually transmits both audio and signal signals to the electrical equipment like satellite TV, computer, etc.

RG6 Cable

What Is RG59 Cable?

RG59 cable is another kind of coaxial cable, commonly used to deliver video signals for cable TV and CCTV connection.





RG59 Cable

RG6 vs RG59 Cable: How To Tell?

How to tell the difference between coax RG6 and RG59 cable? If you look at each coaxial cable, you will find there are words on the PVC jacket. It helps you recognize this is an **RG6**, **RG11**, or **RG59** coax cable. But if the type names are missed, the cables may not be a qualified and professional one. You should avoid buying these coaxial cables.

The other way to tell the difference between coax RG6 and RG59 cable is to compare their diameter. Normally, the outer diameter of RG6 is 6.90mm, while the RG59 is 6.15mm. RG6 cable is thicker than RG59 for it has a thicker center conductor. When you strip out the two cables, you'll see the clearer difference.



Note: RG59 vs RG58 Cable

What is RG58 cable? RG58 cable is a similar coaxial cable like RG59 cable. But it only has an impedance of 50 ohm. RG58 cables are used for RF connection, carrying signals of low power.

White **RG6 & RG59** Cable:



Comparison of RG6 vs RG59

RG6 cables are usually used for satellite and Internet signals connections, while RG59 cables are more likely used for TV and CCTV camera connections. So what is the main difference between them? Please read on!

1.RG6 vs RG59 Construction

RG6 and RG59 cables have the similar construction. They are both made up of a center conductor, a dielectric, a shield, and a PVC outer jacket. Normally, the material of center conductor is CCS which stands for copper-clad steel. As mentioned above, RG6 cables are thicker than RG59 cables. The size of a RG6 cable's center conductor is usually 18 awg while a RG59 cable has a 20-awg center conductor. RG6 cables offer higher bandwidth and better ability to carry high-frequency signals.



2. RG6 vs RG59 Cable: Signal Loss

What is the signal loss on coax RG6 vs RG59 coax cable? The signal loss has something to do with the shielding. The shielding of a cable can ensure good signal quality. The better shielding is, the less signal interference will be. Generally, most coaxial cables contain two types of shielding - Braided Mesh and Foil.

RG6 cables have both types of shielding to prevent interference from damaging signals. But some RG59 cables only have single shielding. So RG6 cables usually carry signals at lower loss than RG59 cables.

Besides, signal loss is also related to the transmission distance. The longer you run the cables, the more signal loss will happen. RG6 cables can carry signals at a longer distance and keep better signal quality than RG59 cables. Therefore, RG6 cables are usually used for high-frequency applications like TV connection, while RG59 cables is more suitable for low-frequency and short-distance transmission.

Therefore, to understand better the topic of coax RG6 vs RG59 on signal loss, you can look at the chart below. It compares RG6's signal loss with RG59 at different frequencies.

Frequency	50Mhz	100Mhz	400Mhz	900Mhz	1000Mhz
RG6	1.5dB	2.0dB	4.3dB	6.8dB	7.0dB
RG59	2.4dB	3.4dB	7.0dB	11.1dB	12.0dB

3. RG6 vs RG59 Frequency Range

RG6 cables can deal with the frequencies of over 50 Mhz while RG59 cables only work with the frequencies of 50 Mhz or lower. RG59 cables don't use a thick copper conductor and strong shielding as RG6 cables do. Therefore, RG6 cables always carry better signal than RG59 cables.

4. RG6 vs RG59 Applications

Both RG6 and RG59 cables are suitable to transmit video signals but there comes difference in their performance. Let's see how RG6 and RG59 cables perform with various video devices.

RG6 vs RG59 For TV Antenna

RG6 and RG59 cables are both commonly used in our daily life. What would you use them for? You need to choose the right one according to the suitable application. Television is one of the most common applications, for which we often use coaxial cable as a TV antenna.

RG6 vs RG59, which is better for TV antenna? RG6 cables have a larger conductor and they are ideal for high-frequency and wide-bandwidth applications. For example, cable TV, satellite TV, or computer network would prefer RG6 cables. However, RG59 is more suitable for low-frequency applications for it is thinner. One of the most common use is security cameras. RG59 is also regarded as one of the best CCTV cables.



RG6 vs RG59 For Digital TV

Which coaxial cable is best for digital TV? RG6 and RG59 cables can deliver audio and video signals. RG6 cables carry old analog TV signals as well as digital TV signals. But RG59 cables mainly carry analog video signals. They don't work well with digital or satellite signals for they cannot deal with such high-frequency equipment. Thus, most people would use RG59 for CCTV that is of lower frequency. And RG6 coax cables are the best for digital signals.



RG6 vs RG59 Cable For HDTV

Can RG6 or RG59 Cable Be Used For HDTV? Coaxial cables support 4K and can carry HD signals between the TV antenna and the HDTV. Generally, it is not recommended to use RG59 cable for HDTV for its thin conductor can't handle such high frequency. You can use RG6 cable for your HDTV but it is not the best option. Signal loss and attenuation can occur from time to time. RG11 cable is the best coaxial cable for HDTV for its thicker copper conductor and shielding.



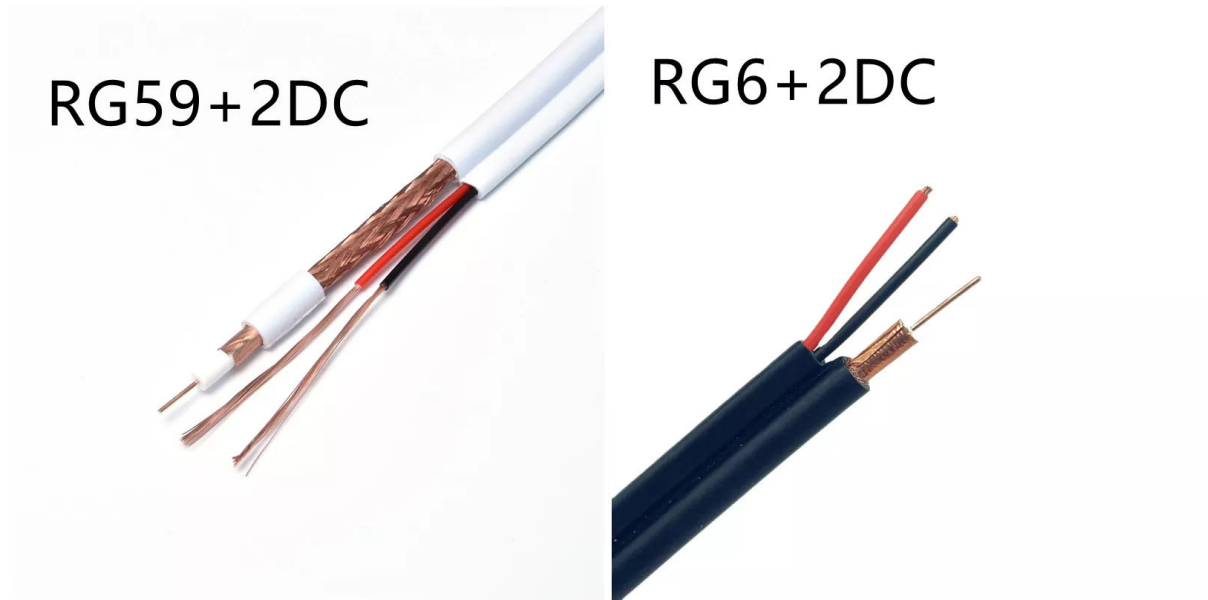
RG6 vs RG59 For CCTV Cameras

Most security cameras require the coax cables with 75-ohm impedance. So both RG6 cables and RG59 cables can be used for CCTV installation. Although RG6 cables can run longer distance with less signal loss than RG59 cables, they are too thick and rigid to fit in corners. This makes them not so handy for the installation of security cameras. RG59 cables are typically used for analog video signals so they can perfectly work with CCTV cameras. Although RG59 cables are thinner than RG6 cables, this makes them easy to install in narrow space. For HD CCTV cameras, it is better to use a RG59 cable of a solid-copper center conductor instead of CCS wire. Higher-quality RG59 cables can deal with higher bandwidth and frequency of the HD equipment.



Coax RG6 & RG59 Siamese Cable

Siamese cables are typically used for CCTV camera installation. RG6 Siamese and RG59 Siamese cables, also known as **RG6+2DC** and **RG59+2DC** cables, are two common types of Siamese cables mainly used for security cameras. They are the combination of a coax cable and a power cable that provides direct current to the cameras.



RG6 vs RG59 For Outdoor or Burial

Normal RG6 and RG59 cables are not available for outdoor or burial installation as their jackets are not designed to face the weather threats. There are different classes of RG6 and RG59 cables that you can choose to use for different installation. Therefore, if you want to run RG6 or RG59 cables outside or burial, you need to buy the Direct Burial or Outdoor versions. These types of coaxial cable usually have better shielding and the PE or PVC outer jacket that can resist moisture, heat, chemical corrosion, cutting, and other threats. RG6 with messenger wire, RG6 quad shield, and RG59 quad shield cables are suitable for outdoor installation and direct burial.

RG6+M Direct Burial/Outdoor Cable



5. RG6 vs RG59 Connectors

Is there any difference between RG6 and RG59 connector? Both RG6 and RG59 coax cables are compatible with F-type connectors. So can I use RG6 connector on rg59 cable? However, you cannot directly install an RG6 connector onto an RG59 cable. RG6 coax cables have a larger outer diameter than RG59. Thus, the RG6 connector won't fit into an RG59 cable because their connectors are of different sizes. When buying connectors for cables, you'd better notice the product information carefully and choose a proper crimper for DIY installation.



6. RG6 vs RG59 Price

RG6 cables cost more per meter than RG59 cables. The main reason is that RG6 cables offer heavier center conductor, thicker insulation, and better-quality shielding and jacket.

RG6 vs RG59: Which to Choose?

Coax RG6 vs RG59, which is the better one to buy? I am sure you've had the answer after reading the passages above. When you want to wire up your TV system or the Internet, RG6 is the first choice to carry high-frequency signals with good quality. But for security cameras, or other low-frequency devices, RG59 cable is always the best CCTV cable that you should buy.

Where to Buy Coax RG6 and RG59 Cable?

New King is a leading coaxial cable manufacturer in China. We offer a series of coax cables including RG6, RG59, **RG11**, **Tri-shield**, **Quad-shield**, etc. Besides, we provide network cable, electrical cable, and connectors for every client.



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We look forward to hearing from you!