



FAQ's

Structured Wiring Enclosures

- [What size of enclosure do I need?](#)
- [Where should I place the enclosure?](#)

Audio Distribution

- [Can I use multiple audio sources with a speaker distribution hub?](#)
- [What type of speaker wire should I use?](#)
- [Why is impedance matching important?](#)

Network Distribution

- [How fast are the Wired Home network hubs?](#)
- [How do I add more network locations?](#)
- [What is a crossover cable?](#)
- [What type of wire should I use for networking?](#)
- [Is a networking hub the same as a networking switch?](#)
- [Is a switch better than a hub?](#)
- [Ok, I got my switch, but where do I put it?](#)

Telephone Distribution

- [Can I use a regular telephone patch cord to connect a network?](#)
- [What about DSL on the phone line?](#)
- [Can I add more phone locations?](#)
- [What type of wire do I need for a phone system?](#)
- [Cat 3, Cat 5, "e" rating...I'm confused, what is the difference?](#)
- [What type of tool do I need for the phone and network hubs?](#)

Video Distribution

- [What is a Multiplexer?](#)
- [What is a Video Modulator?](#)
- [What type of wire do I need for my cable runs?](#)
- [I thought Crosstalk was a radio show?](#)
- [My wire is pulled in, now what?](#)

1) What size of enclosure do I need?

The size of the enclosure is determined by how many hubs you plan on using. As a basic guide you should use an 11" enclosure for 1-2 hubs, a 14" enclosure for 3-6 hubs, and a 28" enclosure for anything more. These

sizes will allow you to have room for the hubs as well as the associated wires and cables you'll be connecting, plus still have room for your hands when you install everything in the enclosure.

[Return to Top](#)

2) **Where should I place the enclosure?**

Just as in Real Estate, location is key to a successful connected home. Here are some guidelines for choosing the best location.

* Keep it dry and cool: Excessive moisture and/or heat can cause problems (such as corrosion) and premature failure of equipment. A dry, cool enclosure is a happy enclosure.

* Keep it centered: Centralize your enclosure in the home, to provide easy access from anywhere in the home. It also keeps the wire runs as short as possible.

* Keep it accessible: You want to be able to access the enclosure at any time, so keep it in a clean area that offers enough space to work in.

Ok, I get it, but where should I put it?

Well, that is up to you. If you are cramped for space then a closet might be the best place, provided you don't mind the coats, shoes, a vacuum cleaner and other stuff getting in the way. Utility rooms can be good, but keep in mind that they tend to be hot and humid. A garage is also another great spot, but remember garages can become cluttered - do you want to walk over paint cans, garden equipment and holiday storage boxes just to get to the enclosure? Basements are also a wonderful location; however, if there is a lot of moisture, you want to keep the enclosures high and dry. There is one place that they should not go: the attic. They tend to be too hot in the summer, too cold in the winter and too dusty all year round. Only you know where the best location is in your home, so when all is said and done you are the one who needs to be happy with the location.

[Return to Top](#)

3) **Can I use multiple audio sources with a speaker distribution hub?**

Our speaker distribution hubs currently accept only one input. If you have multiple inputs, just insert a source selection switch between the sources and the speaker hub.

[Return to Top](#)

4) **What type of speaker wire should I use?**

There are a lot of choices for speaker wire out there and not all of them will work for a distributed audio system. Use only speaker wire that is rated for in wall use. These will be designated by a listing of CL3. You also need to choose the correct size of cable, listed as AWG. or ga., the smaller the number the thicker the wire. For short speaker runs, under 100 ft., 16 AWG. wire is fine. However, runs over 100 ft. require a larger wire to compensate for signal loss, in which case you should use either 14 or 12 AWG. wire depending on the length of the run.

[Return to Top](#)

5) **Why is impedance matching important?**

All audio receivers/amplifiers are rated for a specific impedance (4/6/8/16). If the speakers that are connected have an impedance that is less than the amplifier's rating, the receiver/amplifier will overheat and shut down. On the other hand, if the impedance is too high, then you won't hear much from your speakers. Impedance

matching volume controls and speaker selectors adjust for multiple speakers thus keeping the correct impedance.

[Return to Top](#)

6) How fast are the Wired Home network hubs?

The Wired Home network hubs will support 10/100/1000Base-T networking bandwidth. To utilize 1000Base-T bandwidth you must use Cat 5/5e cable when you install the wiring.

[Return to Top](#)

7) How do I add more network locations?

Adding more network ports is very simple. All that you need to do is take one port from the main network distribution hub and "daisy chain" it to a port on the secondary hub. To connect the two hubs, use a simple network crossover cable.

[Return to Top](#)

8) What is a crossover cable?

A crossover cable is a network cable that crosses pins 1, 2 and 3, 6. This cable is used to network two computers to each other directly or connect two network hubs together that don't have an uplink port.

[Return to Top](#)

9) What type of wire should I use for networking?

Most networking applications use Cat 5 cable as a minimum, but most people prefer to use Cat 5e for the higher bandwidth. Newer networking protocols such as Gigabit Ethernet need a minimum of Cat 5e cable to provide the highest possible throughput. To be sure you should check with your ISP (Internet Service Provider).

[Return to Top](#)

10) Is a networking hub the same as a networking switch?

A hub is a *passive* device that sends all data and bandwidth to any and all devices connected to it. A switch is an *active* device that can assign the data or bandwidth to a specific device. For example, if you have an eight port hub that shares a 100Mbps bandwidth internet connection, then each port will get 12.5Mbps. However, if you were to use a switch, the same 100Mbps could be assigned to a single port; thus the computer attached to that port would have access to the entire 100Mbps bandwidth.

[Return to Top](#)

11) Is a switch better than a hub?

In general, yes, a switch is better than a hub, but it all depends on your specific application. As we saw in the previous question, a hub is *passive* and shares all data and bandwidth with all of the ports. This can cause a large slowdown with data transmissions if there are a lot of simultaneous users. A switch, being an *active* device, can dedicate the data and bandwidth, allowing for faster networking and less chance of data corruption. A hub is also limited to 10Base-T and 100Base-TX networks, whereas a switch can be used in any network application.

[Return to Top](#)

12) Ok, I got my switch, but where do I put it?

Connect the switch at the "head end" of your network. It will be acting as a gateway determining what data goes where.

[Return to Top](#)

13) **Can I use a regular telephone patch cord to connect a network?**

Telephone cords are not designed to work with the high speed transmissions of a network and should not be used.

[Return to Top](#)

14) **What about DSL on the phone line?**

DSL is not a problem for the Wired Home telephone hubs. They currently pass the DSL signal to all phone locations, which requires individual plug in filters where the phones are located (these filters can be obtained from your DSL provider). We are currently working on a DSL filtering telephone hub that will filter the DSL out of the phone line and pass it through to a modem port.

[Return to Top](#)

15) **Can I add more phone locations?**

You sure can and it couldn't be easier. Both of our telephone hubs can be used as stand alone main hubs or as expansion hubs. Simply connect the output port from the main telephone hub to the input on the expansion hub and then connect the extra phone lines.

[Return to Top](#)

16) **What type of wire do I need for a phone system?**

For typical telephones, Cat 3 cable is the minimum that should be used. For more advanced phone systems using multiple lines, paging, voice messaging, sending emails and video conferencing, Cat 5 should be used as a minimum, but Cat 5e provides higher bandwidth. The best is Cat 6, providing up to 500MHz, but that might be overkill for the standard home-owner.

[Return to Top](#)

17) **Cat 3, Cat 5, "e" rating...I'm confused, what is the difference?**

Category 3 is rated up to 10 Mbps at 16 MHz and is used for phone, fax and other slow data applications. Category 5 is rated up to 100Mbps at 100 MHz and is used for higher speed data transmission such as networking applications, but it can also be used for phones. Category 5e has an *enhanced* ("e" rating) range up to 150MHz. There is also an Enhanced Cat 5e cable that allows for transmission rates of up to 350MHz. Cat6 is used for very high speed data transmission found in Gigabit Ethernet and is rated up to 500MHz.

[Return to Top](#)

18) **What type of tool do I need for the phone and network hubs?**

The phone and network hubs require a 110 punch-down tool.

[Return to Top](#)

19) **What is a Multiplexer?**

A multiplexer is a device that allows multiple satellite LNB signals to be combined into single/multiple outputs.

Without a multiplexer, multiple satellite receivers would only be able to receive a single LNB signal that is not being used by another receiver (one receiver would "see" only the even numbered channels while the other would only "see" the odd).

[Return to Top](#)

20) What is a Video Modulator?

A video modulator is a device that allows a composite video and audio signal (RCA) to be converted to an RF signal. The RF signal is then converted (modulated) into a VHF or UHF frequency from 55.25 MHz to 900 MHz (channel 2 - 100+). This allows video sources such as a DVD or security camera to be passed with a regular cable signal and be viewed by any TV connected to that cable line.

[Return to Top](#)

21) What type of wire do I need for my cable runs?

With any cable run, the better cable, the better the picture. I would not suggest anything less than RG-59/U for cable runs, and then only for short runs. The current standard for quality coax cable is RG-6 Quad Shielded. This provides the best shielding from RF and EMF interference and also provides the highest bandwidth for digital cable and satellite.

[Return to Top](#)

22) I thought Crosstalk was a radio show?

In the Home A/V world, crosstalk is the introduction of signals from one cable to another. This is commonly found when low voltage wire is run close to high voltage lines. The high voltage lines will "leak" RF interference into the low voltage lines; this is just one example of crosstalk.

[Return to Top](#)

23) My wire is pulled in, now what?

Now is the time to test all low voltage lines to see if there is a problem. Troubleshooting at this point will make troubleshooting later on much easier. It also will tell you if there is a bad cable that needs to be replaced. It is much easier to replace it now, before the drywall. Also make sure to label all the wire, at both ends, and to wrap the cables up so they don't become damaged by other workers.

[Return to Top](#)