

Steve Uhrig, SWS Security addresses home cable installation

Scott sez:

*> To bring the coax in the house we knocked out a small glass basement  
> window and replaced it with plexiglass, drilled a hole through the  
> plexiglass and put about a 2" length of PVC pipe through the hole to help  
> protect the wires. It is easy to stuff a little insulating material in  
> amongst the wire runs inside the PVC pipe. It has worked out well here.*

You can do that.

A star drill, hammer drill or a piece of EMT and hammer will make nice neat holes through cement block or solid cement where you can put a piece of PVC and seal around it. A star drill is cheap to buy and will last a lifetime, but takes some muscle. You can rent or borrow a hammer drill and masonry bits. A piece of scrap EMT is free and I've had one in my pouch for this purpose since I was a teenager.

When you run a cable into a building, whether through a hole or tubing or bushing or whatever, be sure to run it UPHILL into the house. This keeps water from running in. Water doesn't like to run uphill. Also put a decent sized drip loop right outside the building, like wrapped around the bottom edge of your hand. You want any moisture to collect here and drip off instead of following the cable into the building.

Spray foam is good for filling large oddly shaped voids. It expands to fill all areas, and keeps bugs and vermin out, as well as moisture.

Ductseal/duxseal from the hardware store is cheap and removable, and does all of the above. Comes in one pound bricks and is a stiff, waterproof gray clay. Pull off a blob and massage it until the heat of your hands warms it and softens it. Mold around the cable entry, press way in, etc. When it cools off it will still be soft and sticky, but hard and creatures or moisture cannot get through. You can pull it out later if you want to work in the access point again. It's good for waterproofing anything electric, including cable entries into the top of electrical meters or other boxes where the rubber glands have worn out.

*> Regarding the remote antenna switches. They are great! They pay for  
> themselves by reducing the amount of coax you need and the added  
> convenience of flipping a switch to change antennas is wonderful. I've  
> got a 5 position remote switch about 150' back in the woods. One coax run  
> instead of 5 represents 600' of coax I didn't have to buy and a smaller  
> hole entering the house.*

For long runs they have their place.

For short runs it's a toss up.

You can't operate parallel antennas/rigs/bands easily, but as Scott mentions you can save a lot of coax on long runs. You need a decent switch rated for the highest power and frequency you expect to use, either rated for direct exposure to the weather or mounted in a NEMA 4 plastic box with all cable entries sealed. You need control cables. You may need a local power supply.

The redundancy of extra cables compared to the cost of labor to rerun them in the future (and all cable has a lifetime, with the max you can expect from even the best coax not exceeding ten years) is a consideration.

The pros vs. cons of a remote switch depends on the application. For Scott, it's the way to go. Would need more info on other installations to make a determination there. I don't use them but I am blessed with having competent technicians who can run cable anywhere.

I am a believer in running lots of cables: all you need plus 50% spares, plus leaving a pull cord or two behind for the next clown who has to pull cable in the middle of the winter in the dark in foul weather. Pull cord is VERY cheap. A thousand feet costs a lot less than you'll pay a technician for one hour of labor, and pull cord lasts forever. You can get it in different colors to identify different runs terminating at the same place. Cable is cheap compared to the labor to install it. I have one job where I run one half mile underground, all in pipe coming up to above ground cable pedestals every 150 feet (max workable length of a fish tape is 200 feet), and Ron (my tech) and I have 60 pieces of coax, power and CAT 5 cable running the length of that estate. When one dies or we need to add function, it's a matter of connecting an existing line, not opening fifteen pedestals, dealing with snakes, water and weather and pulling in more cables.

For pulling through tight pipes or chases, liberally use cable lube. Comes in one quart squeeze bottles or 5 gallon buckets. Use gloves and slop it on. You can't use too much. It's water soluble, and dries in an hour or two to a slippery powder and doesn't hurt the cable. Washes off your flesh with water. Saves overstressing coax, which once you do it can't be undone. Coax is rugged in a way, but during install is incredibly fragile stuff. You can't pull on it too hard or you deform it. You can't radius it beyond 10:1 or you kill the impedance. Can't kink it. Use cable lube. It's cheap insurance.

Look to the future and consider weather is not always optimum, your health may not be and cost of materials and labor is almost guaranteed to go up. Use those factors as input in making your decisions.

Steve WA3SWS

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Steve Uhrig, SWS Security, Maryland (USA) Mfrs of electronic surveillance equip NO LONGER AN ICOM DEALER, ask us why!

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"In God we trust, all others we monitor"

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