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Estimating wire needed for residential work

 larry trickett ·  Feb 19, 2006

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larry trickett

Member

Feb 19, 2006

 #1

Does anyone know of a rule of thumb method of estimating how much wire would be needed to wire say a 5000 square foot house.

I know I need to separately determine the special purpose circuits.



JohnE

Senior Member

Feb 19, 2006

 #2

Re: Estimating wire needed for residential work

I don't have a rule of thumb, but if I were doing it I'd use about 6000' 14/2, 2000' 14/3, 2000' 12/2. Based upon past experience. Plus Cat 5, RG6 Quad, 18/2, 18/6, 16/2 fire alarm cable, etc. as needed.

Oh yeah, and zip cord for the under cabinet lighting.



wyatt

Senior Member

Feb 19, 2006

 #3

Re: Estimating wire needed for residential work

I have found that 1' per 1 sq foot of 14-2 is real close. 1/4 that for 12-2 and 14-3. Also real ball park but close fig \$1 per sq foot in material. this includes wire

**stars13bars2**

Senior Member

Feb 20, 2006

#4

Re: Estimating wire needed for residential work

Tony

Is that using 14/2 on receptacles other than small appliance, bath and laundry?

**wyatt**

Senior Member

Feb 21, 2006

#5

Re: Estimating wire needed for residential work

Yea, your basic code min. type of wiring.

**ceb**

Senior Member

Feb 22, 2006

#6

Re: Estimating wire needed for residential work

Tony is correct on the 1ft per 1sqft. I have been doing 3100sq ft speck. homes and wind up with 3000' 14-2 , around 500' 14-3, and 250' 12-2 in each one

**Paul B**

Senior Member

Feb 23, 2006

#7

Re: Estimating wire needed for residential work

Wyatt, does that include the service?

Paul

**wyatt**

Senior Member

Feb 24, 2006

#8

Re: Estimating wire needed for residential work

on the cost of material? yes but it is ball park. every house is deferant but it is close.



jimwalker

Senior Member

Feb 24, 2006

 #9

Re: Estimating wire needed for residential work

Many variables.Distance from panel will be a biggy.The larger the home the longer the HR.



workingman

Member

Mar 8, 2006

 #10

you guys still use #14 huh?



peter d

Senior Member

Mar 8, 2006

 #11

workingman said:

you guys still use #14 huh?

Here we go again. :roll: There is absolutely nothing wrong with #14. Millions of feet of it are installed every year. Please provide one good reason why #14 is bad.



wyatt2

Member

Mar 9, 2006

 #12

For all guys that think all #12 makes you a better electrician, thats just a lot hot air you blow at the HO. In the hands of a good electrician #14 is a great product. I would bet money that I could go to one of your all #12 jobs and find a box fill gig.



JohnE

Senior Member

Mar 9, 2006

 #13

I second Peter's motion.

**electricmancott**

Senior Member

Mar 9, 2006

 #14

workingman said:

you guys still use #14 huh?

Ignorance.

M**mullet**

Member

Apr 25, 2006

 #15

I do not use #14 or multiwire branch circuits.

I will not down anyone for doing so.

My reason, Safety!

We all know what happens when a 15 amp circuit starts tripping the breaker now don't we.

Of course the same thing can happen with #12 but not as likely

The only defense I hear from people who have to use the two fore mentioned methods to be competitive and get jobs is that the home owner or unqualified persons should not be doing electrical work.

Or that the reason is to save copper and power consumption.

I agree, but.

If I can keep one conductor from starting one fire and taking one life or one home then I dont feel that my choice was made out of ignorance.

I know many contractors that feel the same way.


That the gain is not worth the risk.

**infinity**

Moderator

Staff member

Apr 25, 2006

 #16

If I can keep one conductor from starting one fire and taking one life or one home then I dont feel that my choice was made out of ignorance.

I know many contractors that feel the same way.

That the gain is not worth the risk

How can a #14 conductor with a properly sized OCPD be a fire hazard? What makes this any less safe than a 20 amp circuit?



quogueelectric

Senior Member

Apr 25, 2006

#17

14 wire

14 wire

Common sense and a good understanding of ampacity is all one needs to install 14 safely. Some commercial electricians think they are above 14 wire but they have a lot to learn if they cannot install it safely. Sparky



celtic

Senior Member

Apr 25, 2006

#18

mullet said:

I do not use #14 or multiwire branch circuits.
I will not down anyone for doing so.

My reason, Safety!

We all know what happens when a 15 amp circuit starts tripping the breaker now don't we.
Of course the same thing can happen with #12 but not as likely

Why not just use #10?

M

macmikeman

Senior Member

Apr 25, 2006

#19

There is very little chance of overloading a 15 amp circuit when using 4/0 ser cable for the branch circuit wiring. Its just hard to get the receptacles into the box afterwards. Seriously, you can overload a 20 amp circuit wired with #12 just as easy as you can a 15 amp circuit wired with #14. But I still prefer to wire all receptacles with #12, just since they make some high powered vacume cleaners nowadays. Lighting circuits in a residential - #14 is my standard. On commercial there is a fair chance of somebody adding drop in fixtures to the existing circuits, so I use lots of circuits and minimum #12 branch, lots of times #10 branch wiring for the lights on a 20 amp breaker.



dlhoule

Senior Member

Apr 26, 2006


#20

Me, I think #11 would be better than 12 and just as soon as I find it, I'll consider quitting with the 14.

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