

## Do You Get What You Pay For? (Part 1)

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A few years back I took a two-week course on hand tools at NBSS. It was my first exposure to that well-renowned institution. On day one the instructor insisted that I get a Starrett combination square (conveniently sold at the school store) even though I had brought with me the brand- X square I already had (conveniently acquired at a yard sale). Most of the other requirements for the course were for equipment I did not already own.

During the two weeks of classes, I was struck by how many times the teacher uttered “get out your Starrett.” I suspect that like Kleenex and Xerox, the Starrett brand name has become a generally-used and trademark-infringing term for a class of items. But I digress.

Probably the most used hand tool for most woodworkers is the combination square. And when it comes to making a purchase, the price options are huge. A selection of the most popular combination squares I found online is in my table below. You can see the range for a 12” model starts at under \$7 and rises to \$170 – a factor of 25x. This raises the by-now-familiar question of “do you get what you pay for” often shortened to “is it worth the difference”?

Vendor/Model	Online Price	Note
Johnson 400EM-S	\$6.75	
Mr. Pen	\$7.99	
Harbor Freight	\$7.99	
Stanley	\$10.64	plastic
Empire E250	\$10.97	cast zinc, need to deburr the blade
Beetro	\$10.99	
Wen ME144L	\$11.45	aluminum
Tricolfttech	\$11.99	
Irwin 1794469	\$12.99	cast zinc, stainless blade; some issues the “squareness”
Kapro 325M	\$20.36	
Swanson TC132	\$21.98	cast zinc, stainless blade; supposed to be easy to fix “squareness”
iGaging	\$31.00	
WoodRiver 154239W	\$39.99	
Starrett 11H-12-4R	\$77.00	steel blade, regular finish, cast iron head, black wrinkle finish; list price = \$87
PEC 7121-012	\$89.98	cast iron head, satin chrome blade; 4 etched scales; some dealers offering factory defective models.
Starrett C11H-12-4R	\$99.00	Satin chrome blade, black wrinkle head, cast iron; list price = \$107
Starrett 33H-12-4R	\$113.00	Regular blade finish, smooth black forged steel head,
Starrett C11HC-12-4R	\$120.00	Satin chrome blade, cast iron head, wrinkle finish; list price \$130
Starrett C33H-12-4R	\$113.00	Satin chrome blade, smooth black forged steel head; List price \$126
Woodpeckers	\$169.99	indexable; available May 2021

One of the nice things about shopping online is the customer feedback postings. The positive reviews are always suspect (is it a company employee doing the posting?), but the negative ones tend to ring true. A-not-to-be-overlooked time-saving benefit comes from sites like Amazon, wirecutter.com, and garagetooladvisor.com that run articles along the line of “the best XYZ products.” Sometimes you can just enter “show me the best xyz” into google and let the search engine do its job. But I digress.



What I learned: Major differences to look out for when selecting a combination square include:

- Head material (zinc, cast iron, etc.)
- Head finish (wrinkle or smooth)
- Blade material (iron, forged iron, stainless)
- Blade length (my price table included 12” devices with a single head)
- Blade finish (satin or matte easier to read than bright)
- Metric or imperial markings
- Type of graduation scale
- Are the graduation markings etched or painted
- Can the key angle can be adjusted if not a true 90 degrees

Less important differences include:

- Includes scribe?
- Includes bubble level?
- Available with different heads (centering, protractor)
- Available with different length blades
- Country of origin
- Head color (black, red, blue, yellow all possible)
- Available in a kit with larger or smaller rulers, other heads

Problems to be aware of:

- Flimsy blade
- Sticky slide lock
- Blade has burrs
- Not true 90 degrees

## Starrett

If there is such a thing as a leader in the combination square market, Starrett is surely the one. Made in the USA, Starrett products have an outstanding reputation in a variety of tool categories. In the combination square market, they offer 163 different SKUs on their website, of which 28 are for 12" blades covering a variety of graduation types, head finishes, head types, head materials. They even have a "student" model. The website includes list prices for most, but does not provide a decoder ring for the product designations. So the -12-4R contained within the designation C11HCS-12-4R can be interpreted by studying the website, but the remainder remains a mystery for the time being. I think a C as the first letter designates a cast iron head, but maybe not. Safe to say, nobody matches the variety of combination squares available from Starrett. It's not clear exactly where you can actually purchase all these different product combinations. Woodworking retailers typically offer just one Starrett model.

Here's one interesting puzzle. Amazon lists the 11H-12-4R for \$77. The Starrett website shows the C11H-12-4R with a list price of \$107 – currently selling for \$124.99 on Woodcraft and \$118.99 on Rockler. The only difference between the 11H and the C11H that I can detect is that the 11H has a "regular" blade finish while the C11H has a satin chrome blade finish. This stuff could drive you crazy.

## Woodpeckers

Safe to say Woodpeckers is the target of much criticism from EMGW members. If Starrett fills the BMW or Mercedes position in hand tools, Woodpeckers is seeking the Maserati or Aston Martin role. The company recently introduced a line of "in-dexable" combination squares, taking the high-price position over from Starrett. These products have not yet started to ship, so if you're looking to add some bright red accents to your workshop, you'll have to wait, but the promo materials tout features like laser-accurate scribing guides (for fine pencil points), positive indexing of the head at every full inch, a sliding head support and precise, laser-engraved scales." Check out the 3-minute video at <https://www.woodpeck.com/in-dexable-combination-double-squares.html> to see all the combination square features that you've missed since 1878.

## PEC

This brand, also made in the USA, seems to come in just behind Starrett in some of the comparison articles I found. Many suggest PEC is comparable to Starrett but at a lower price.

Bottom line: Only pay for what you need!

