

Common Cents *Quick-Tips Guide*

Full information on the Common Cents System can be found in the Volume 6 #2 issue of RodMaker.

Easy Set-Up

If you plan to use the Common Cents System on a regular basis, you should consider some sort of helpful set-up that allows you to quickly and easily implement the system at a moments notice.

A 4' by 8' sheet of pegboard with holes of 1 inch spacing can be used to greatly speed up the process of measuring the required deflection of your rod blanks (1).

In the photo, the pegboard is mounted to a free standing frame, but it could just as easily be mounted to a wall. You could also create your own 1 inch grid lines on a wall or sheet of plywood and mount or hang that for the same purpose.

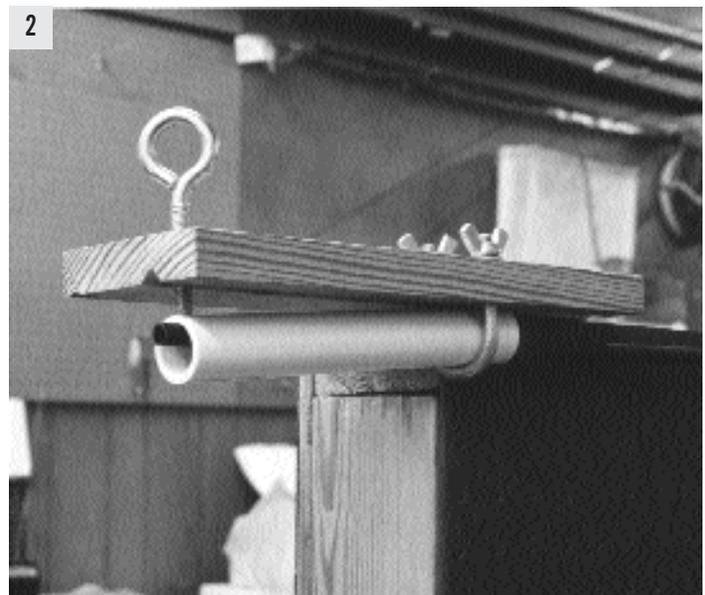
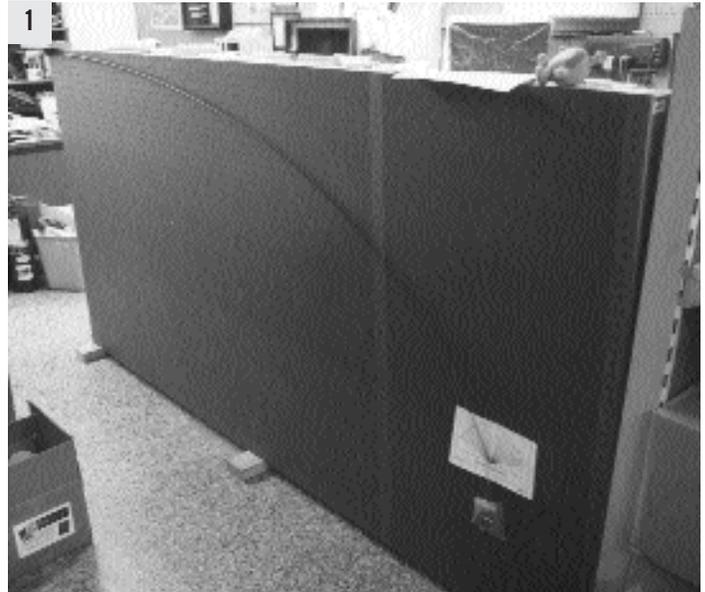
Leveling The Blank

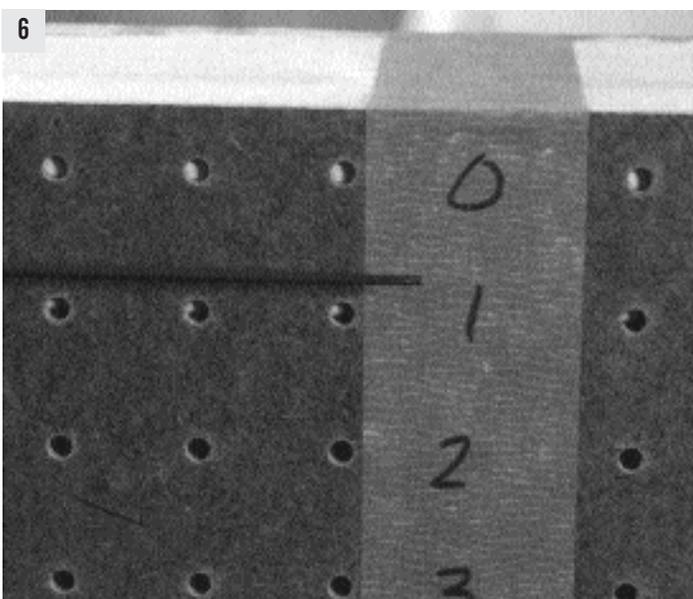
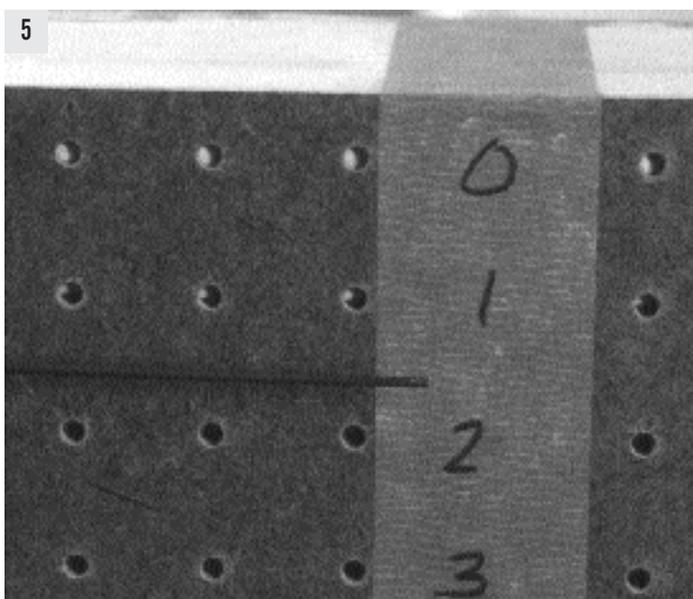
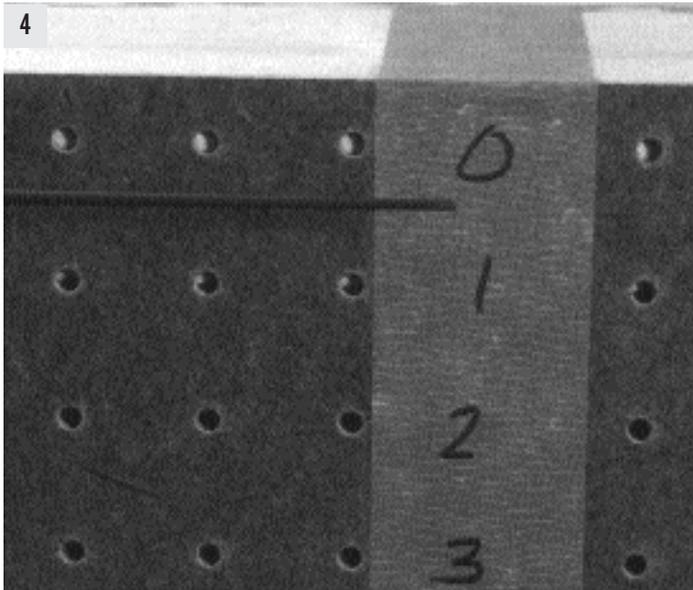
The Common Cents System requires that you level the first foot of rod blank. In other words, the first foot of the rod blank, the butt end, needs to be horizontal.

In the photos (2&3) you'll see a simple yet effective means for doing this. A piece of 1 x 4 has been mounted to the top of our pegboard frame. At the forward end is a U-bolt supporting the forward edge of a short section of 1 inch diameter PVC pipe or tubing. At the rear, a hole has been drilled and a common eye-bolt snugly threaded through the hole. By turning the eye-bolt either in or out, the rear of the PVC pipe is either raised or lowered, effectively leveling the rod or blank butt along the first foot of its length.

It is important to support any rod or blank as near to the very butt end as possible. Too short and you risk damage to the blank, too long and you skew the Common Cents readings. To ensure accuracy, try to have the forward edge of your support device, in this case our PVC pipe, so that it supports the rod or blank at a point which is no farther forward than 10-percent of the blank's total length. In most cases, anything within that range will not alter the final readings. For you own comparison, our PVC pipe is 8 inches long. This will handle most of the longer rods and shorter rods can be slipped forward in the pipe to keep their forward support edge at point no farther up than 10 percent of the total blank length.

Any jig or fixture that allows you to level the rod butt is fine. Another method would be to mount a pipe or tube flat against a board, and then mount that entire assembly to another board - flat to flat, with a bolt or screw that allows the back half of the board with the pipe to swivel up or down (picture the back half of a pair of scissors). On one end, the rear board would have a threaded rod or stud protruding through a slot in the front board, which could be secured at the proper angle with a wing nut.





Zeroing The Tip

Due to their inherent weight, all rods and blanks will display a certain amount of sag or droop from the level of the butt. This is not only okay, it's necessary that we take this into account in our readings as the blank has to carry not only our line or lure, but its own inherent weight! Thus, any deflection from the blank's own weight is considered part of the required deflection, not a starting point for that deflection. In other words, if you require a total deflection of 30 inches, and your blank exhibits an initial sag or droop of 1 inch, you would then add pennies to your bag until you achieve an additional 29 inches of deflection, giving you the 30 total inches.

However, all rod blanks also have a natural curvature or warp. We need to remove this so our readings won't be skewed by this anomaly, which is not at all the same thing as the sag or droop caused by inherent weight. Thus, we want to -zero- the rod blank tip.

We do this by rotating the blank's butt and finding the high and low point for the tip on our pegboard or grid. In the photos (4 & 5) you see we have rotated our blank to find the high and low position against the grid. Once this is done, we rotate the blank so that our tip is in the middle of the two readings (6). This will take any natural curvature, bend or warp out of the equation, but still leave us with the initial deflection created by the rod or blank's inherent weight.

And What Of Spine?

Yes, having the spine up or down, or the blank's stiffest axis (not necessarily 180 opposite of the spine) up or down, will change our blank's ERN rating. So, what should we do about it?

Once you've zeroed the tip and taken your reading by deflecting the blank tip the required number of inches. Count your pennies and convert them to the correct ERN rating for the blank. This gives you the all-around or average rating for any particular blank. If you find however, that you'd like just a bit more power, or a bit less, you can rotate the blank butt again, pitting the deflection against or with the spine or stiffest axis. Each position will result in a slightly different ERN rating. The difference will be slight, but measurable. By placing your guides on the axis that provides you with the most desirable ERN, a good rod builder can more closely match the rod to the customers needs.

Do remember that when making our Common Cents deflection, the rod or blank is upside down compared to its orientation when in use out on the water. Thus, for fly and spinning rods, or spiral wrapped casting rods, your guides will go on top of the blank when it is in the position that provides you with the desired ERN or casting weight. On conventional casting type rods, the guides would go on the bottom when the blank is in the position that provides you with the desired ERN or casting weight.

For the most part, using the spine to slightly increase or decrease the optimum fly line or casting weight should not be expected to result in dramatic differences, but it does provide the rod builder with a means of some additional fine tuning.

Prepackage Your Cents

Having to count a bunch of pennies each time you rate a rod or blank is a hassle that you don't need to put up with. Prepackage some pennies of known amounts in very small and lightweight plastic bags and write the number of pennies they contain on the side. Here we have prepackaged cents in quantities of 10, 20 and 30 (7).

It's simply much quicker and easier to add bags of 10, 20 or more to the rod (8) to gain the majority of the needed deflection, and then use an open bag (7 top-left) to add a few individual pennies to bring us to the exact deflection required.

Some builders have mentioned that the weight of the components (guides) will also affect our blank's deflection, and that since the rod must carry this weight as well, shouldn't it be factored into the deflection part of the equation. Well, if you really want to get the greatest accuracy and desire to know the ERN for the finished rod, then you can certainly do this. But you can't just drop your guides in the same bag with the pennies! Remember, that on the finished rod the guides will be placed at points all along the rod so their weight is distributed differently than if you simply hung them from the rod tip. Thus, if you want to add the weight of your components, you should tape them along the blank at locations roughly comparable to where they will be located on the finished rod.

Unless you're using exceptionally large or heavy guides, the weight of the guides will make only a very, very slight difference in the ERN. The one possible exception to this would be on spinning rods where you are not utilizing the New Guide Concept and your guides might be rather large. In this case, they might possibly add enough weight to measurably change the ERN.

Action Angle

In order to gain the correct Action Angle reading, you must attach a lightweight pointer to the rod tip. Here, we have used a short piece of straight steel wire (9). The originator of the system, Dr. William Hanneman, suggests a piece of uncooked spaghetti. Either will work equally well.

So why do we need this straight pointer? Why not just take the reading off the rod blank itself? Simple really. The blank or rod bends. Thus, the Action Angle reading for any blank would be different depending upon the size of our chart and how much the tip area of the rod is bent. In order to guarantee accurate and consistent results, regardless of the chart size or flex in the tip area of the blank, the straight pointer allows us to take our readings directly off the very tip of the rod. With the straight pointer attached to the tip with a piece of tape, the Action Angle for any given blank or rod will be the same for everyone and regardless of the size of your Action Angle chart or protractor. Remember, accuracy and consistency are key elements of the Common Cents System and provide us with results that are indeed relative to one another. 

Handy Common Cents Equations

For 54 cents or less -
 $(6.25 \times \text{number of cents}) - 1.2 = \text{ERN}$ • $\text{ERN} = \text{ELN}$

For 55 cents or greater -
 $(3.48 \times \text{number of cents}) - 20 = \text{Correct line weight in grains}$

