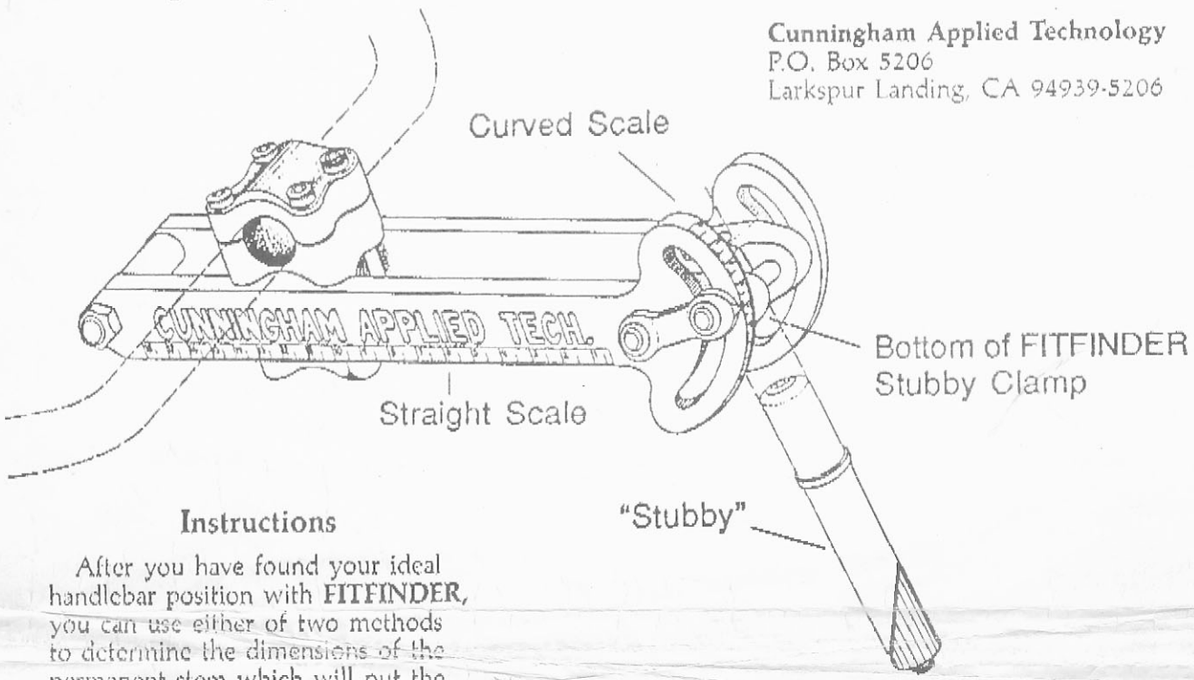
PROPER USE

It is your responsibility to use this product safely. Do not position the **FITFINDER** so that it prevents adequate control of the bicycle in normal use or extreme use. Each time the bars are moved, check to see that the control cables do not bind and that the stem position does not impede steering. Before riding, check the brakes to see that they are working properly. Ride with caution while experimenting with unfamiliar handlebar positions, staying alert for unanticipated problems.

Check to see that the handlebars are firmly located and that the adjustment bolts are tightened to prevent slipping under any conditions. Overtightening or undertightening the bolts on the **FITFINDER** is unsafe. The four 5mm allen-key handlebar clamp bolts should be progressively tightened to a torque value of 8 to 10.5 ft/lbs (1.1-1.5 kg/m). Suggested torque for the two 6mm main pivot bolts is 18 to 21 ft/lbs (2.5-2.9 kg/m).

Because the **FITFINDER** is heavier than a normal stem, it can affect weight distribution and handling on a light bike. The user should take this factor into account.

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Instructions

After you have found your ideal handlebar position with **FITFINDER**, you can use either of two methods to determine the dimensions of the permanent stem which will put the bars in exactly that position.

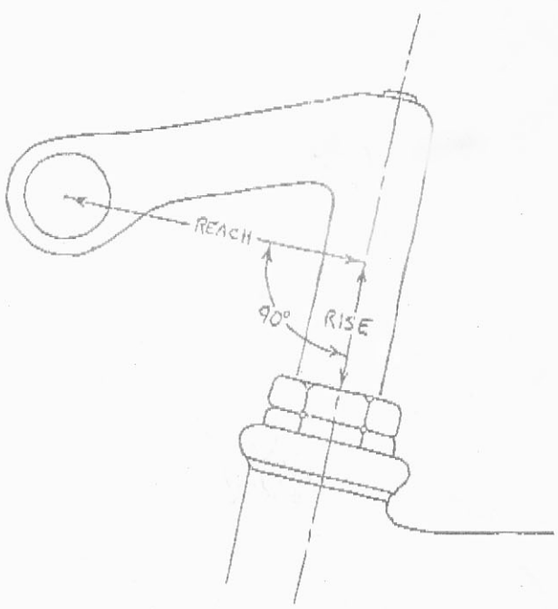
Method 1.

The **FITFINDER** has a straight numerical scale and a curved numerical scale. The numbers on those scales do not correspond directly to the actual Rise and Reach, which are calculated from the Conversion Chart as follows:

Note on the **FITFINDER** the 0 to 16 cm "straight scale" and the 0 to 10 cm "curved scale." Find and mark each number (indicated by the pointer) on the corresponding straight and curved axes of the Conversion Chart. If they are not integers, interpolate between integers to locate the correct points.

Follow the scale lines inward from the points you have marked, marking the intersection with a pencil dot. Then follow the perpendicular grid lines out from this dot to the corresponding Rise and Reach centimeter scales on the outermost part of the chart. This is the exact Rise and Reach stem you need. *(Note: If there is a space between the bottom of the FITFINDER clamp which attaches to the "Stubby" and the headset topnut, you must add this distance to the Rise indicated by the Conversion Chart. This will give you the true Rise and Reach for your permanent stem as measured from the top of the headset topnut.)*

The Rise and Reach specified by the **FITFINDER** Conversion Chart are based on a 90° axis as shown below:



Reach specification on the 90° system is universal and can be converted to other stem angles. To convert the 90° Reach extension specified by the Conversion Chart, divide by the SIN of the desired angle and the result will be the extension in centimeters at the new angle.

Example: The Reach extension of 70° road stems and 110° mountain bike stems can be found by dividing your Conversion Chart Reach by .94 (SIN 70). If the Conversion Chart specifies a 90° Reach of 21 cm, the equivalent Reach at either 70° or 110° would be 21/.94 = 22.36 cm. (The result is the same for 70° or 110° because the Sine of 70 and 110 is the same.)



Method 1 Example

Let's say that the pointer on the Straight Scale of your **FITFINDER** indicates 11.2 and the pointer on the Curved Scale indicates 4.6. Find these numbers on the corresponding axes on the Conversion Chart. There is a dot where the scale lines which go inward from these two numbers intersect. Following the straight lines from this dot to the edges of the chart gives a Reach of 15.6 cm and a Rise of 6.0 cm.

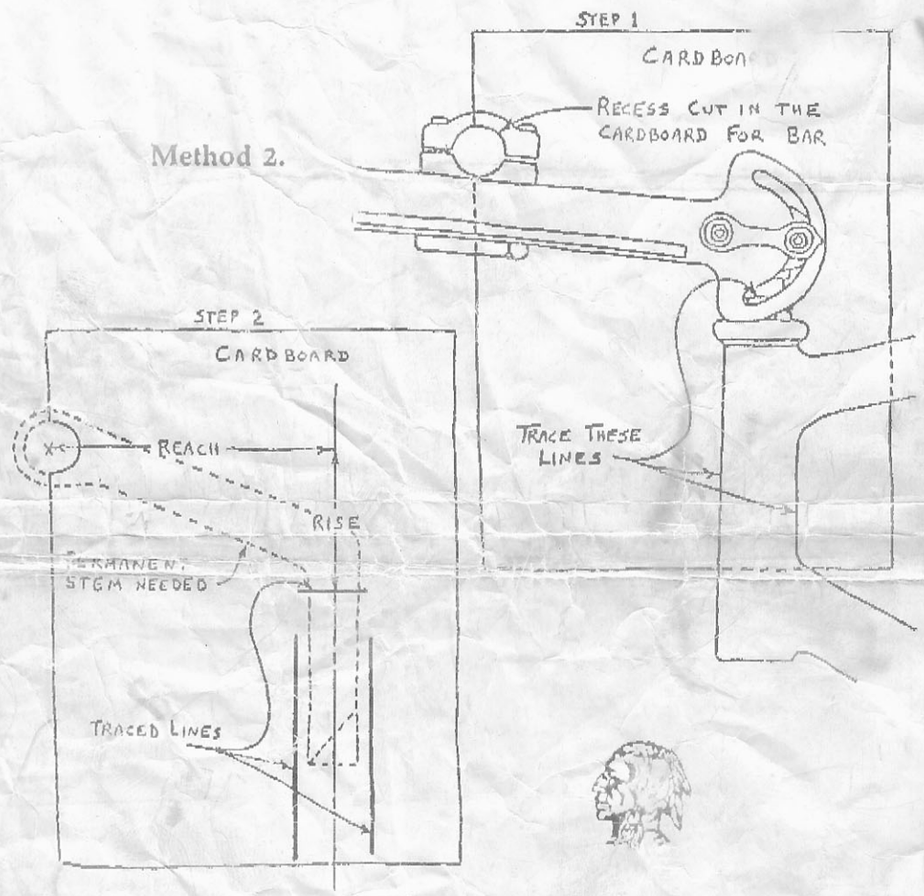
Check the distance between the bottom of your **FITFINDER** "Stubby" clamp and the top of your headset topnut. Let's say it is .5 cm. Adding this .5 cm to the 6.0 cm we get an actual Rise of 6.5 cm, so the stem specified by the **FITFINDER** is 15.6 cm Reach and 6.5 cm Rise. Knowing this you can choose the stem which comes closest to these dimensions. Most production stems have adjustable rise, so the 6.5 cm Rise above the topnut can be set at the time of installation. If a satisfactory production stem cannot be found, a custom stem can be ordered from a source offering this service.

Note: Negative Rise is common on road bikes with 70° stem angles, and this means that the handlebars are below the top of the topnut. In these cases the permanent stem must have an acute angle to accomplish the specified Rise.

Method 2. (Empirical)

Cut a half circle recess the same diameter as the handlebars in a piece of cardboard. Place the recess against the bars as shown, with the cardboard behind the **FITFINDER** and headtube of the bike. Trace the location of both sides of the headtube and the top of the topnut onto the cardboard. Lay the cardboard on a flat surface and place stems on it with the stem shank parallel and centered between the two headtube lines until you find one which puts the bars where the recess is. You can also use the tracing to specify permanent stem Rise and Reach by measuring directly off the cardboard as shown in Step 2 drawing.

Method 2.



Method 1.

