The first consideration in drawing the Tree of Life is that it has proper proportions which should be adhered to if one is to get the best results from working with the Tree. A properly drawn Tree will be twice as high as it is wide. In order to get the proper spatial relationships between the Sephiroth and the Paths it is necessary to lay out a construction format of pencil lines which will later be erased. This construction format consists of one straight line and four arcs (see diagram step #2). These are simply construction lines and nothing more.

The first step is to decide how high you want your Tree to be. Then divide this height by 4.5. This will give you the radius of the arcs shown in step #2 of the diagram. Divide the radius of the arcs by four and this will give you the radius of the Sephiroth. Divide the radius of the Sephiroth by four and you will have one-half of the width of your Paths. You want this half-width figure because you are going to use your compass as a divider to mark off, from center lines, the outer lines of the Paths.

Some sizes of Tree are more easily measured for than others; a ten inch Tree, for example, might look well on an 8 1/2 by 11" sheet of paper, but you start out with arcs of 2.222..." and go on from there with non-terminating decimals every step of the way.

A nine inch Tree will look just as well and will give you more margin besides. 9" ÷ 4.5 = 2". Thus two inches will be the radius of your arcs. 2" ÷ 4 = 1/2", so one-half inch will be the radius of your Sephiroth. 1/2" ÷ 4 = 1/8", therefore one-eighth inch will be one-half of the width of your Paths.

For a large wall diagram a 36" Tree makes a very striking piece especially when it is done in color and framed. Everyone should, at some time, make a large Tree with the attributions on it. For a 36" Tree we would make the following calculations: 36" ÷ 4.5 = 8" — the radius of the four arcs. 8" ÷ 4 = 2" which gives us the radius of the Sephiroth. 2" ÷ 4 = 1/2" which will be one-half the width of the Paths.

To center your Tree vertically on the paper make the following calculations: Subtract the height of the Tree from the length of the sheet and divide this remainder by two. To this quotient add the radius of one Sephirah. The result of this calculation will give you the distence, from the top of the sheet, down line 'A', to the center point of arc 'B'.

Examples:

To center a nine inch Tree on a sheet of paper eleven inches long we would calculate as followes: 11" - 9" = 2" ÷ 2 = 1" + 1/2" = 1 1/2".

To center a thirty-six inch Tree on a forty inch sheet of illustration board the calculation would be: 40" - 36" = 4" ÷ 2 = 2" + 2" = 4".

To center your Tree horizontally on the sheet of paper you need only put line 'A' in the exact center of your working area. Keep in mind that the Tree will be one-half as wide as it is high.

To put the Tree on paper you will need some drawing tools. These need not be the most expensive in the world; avoid getting an expensive drafting set, but they should not be dime store junk either. My advice is to get just the tools you need at the time; but get tools that you can live with. In this way, as the years go by, you will accumulate everything you need to do qabalistic drawing in practically any size, but you avoid laying out a great deal of money at one time.

What you need right now are very basic tools: You need a compass. Get one that will draw a circle with at least a three inch radius and one that has a wheel and screw setting. You need a straightedge ruler. There is a very good plastic ruler on the market which is triangular in shape and has six scales on it. You do not need the scales, but if you ever want to draw in ink this is the ruler to get because you can rotate it away from the line without smearing the wet ink. Get a ruler marked in fractions rather than in decimals. A fractional ruler will give you the exact marks you need to set your compass if you stick to arcs which are whole, even numbers. While it is not strictly necessary, you should have a draftsman's lead clutch and the special sharpener that is used with a lead clutch. Use a fairly hard lead (2-H) so that you will get a fine line without smearing. Compass leads are sharpened diagonally; use one of the small plastic nail files which are given away as advertisements for a compass lead sharpener.

Now that we have our proportions worked out and are set up with drawing tools let's draw a Tree. Take a sheet of 8 1/2 by 11" paper and measure 4 1/4" over from one side at both the top and bottom of the sheet. Be sure that you measure from the same side of the sheet as paper is not always exactly square. Now, with your straightedge draw a line down the center of the sheet using your measured marks as guides. This center line is line 'A' in the diagram. To center your Tree on the paper measure down line 'A' 1 1/2" from the top of the sheet to get the center of arc 'B' and the center of the Kether of your Tree.

Set your compass arms exactly two inches apart and draw arc 'B' as shown in the diagram. Where arc 'B' crosses line 'A' is the center of arc 'C' and so on. Be sure to make your arcs full enough so that they meet each other at the ends. Do not be afraid to make visible holes in the paper with your compass point; you will need to find these holes and use them as guide points later.

Now that you have a center line and the four arcs upon it placing the Sephiroth upon this construction format is a simple matter. After setting the compass arms 1/2" apart find the measured point on line 'A' from which you drew arc 'B' this is the center of the Kether of your Tree. Chokmah (right) and Binah (left) are centered where arc 'C' crosses arc 'B'. Chesed (right)

and Geburah (left) center where arc 'D' crosses arc 'C'. Tiphareth (middle) is centered where arc 'C' crosses line 'A'. Netzach (right) and Hod (left) center where arc 'E' crosses arc 'D'. Yesod (middle) centers where arc 'D' crosses line 'A'. Malkuth (middle) is centered where arc 'E' crosses line 'A'. What about the point where arc 'B' crosses line 'A'? This would be the center of Daath, but Daath is not a Sephirah and it is not shown on the Tree.

It will be seen now that line 'A' centers the entire Middle Pillar forming the center line for the Paths of: Gimel, Samekh and Tau; as well as centering the Sephiroth of: Kether, Tiphereth, Yesod and Malkuth. If you are going to put attributions into your Sephiroth leave line 'A' intact so that you can use it as a centering guide. Outside the Sephiroth leave line 'A' intact to center the three Paths of the Middle Pillar.

To avoid unnecessary confusion it might be a good idea to carefully erase the pencil arcs which you used to place the Sephiroth. Before you erase these arcs check to make sure that your Sephiroth are centered accurately.

We have already seen that line 'A' has centered three of our Paths and four of our Sephiroth, we have checked to make sure that the holes left by the compass fall at the intersections of line 'A' and the proper arcs to prove the positions of the Sephiroth of the Middle Pillar. Kether is, of course, right by definition as it is a measured point and the point from which the rest of the Tree springs both in drafting and in fact.

With your straightedge check the two side Pillars. On each of these side Pillars the three compass holes centering the Sephiroth should line up on your straightedge so that you can draw a line through all three of them. These two center lines, for the side Pillars, will not only center the two Paths of each Pillar but will also center the remaining six Sephiroth should you wish to put attributions inside them.

Now take your straightedge and lay it diagonally across the Tree from Hod up through Tiphareth to Chesed. Again all three center holes should line up on your straightedge so that you can draw a line through all three of them. This time do not let your line enter the Sephiroth themselves, but only go up to the outer edge of each Sephirah. Going diagonally the other way run your ruler from Netzach through Tiphareth to Geburah and check to make sure that the center holes line up. Again draw your centering lines only to the outer circumference of the Sephiroth. If the centering holes left by your compass on the three Pillars and the two diagonals line up you can be reasonably sure that your Tree is in good shape. Center the remaining Paths by using the centering holes of the appropriate Sephiroth as guide points and draw your pencil lines between the outer edges of the Sephiroth.

Widening the Paths is one of the most meticulous jobs in the whole project, yet it is easy once you get the hang of it. When the Paths are

given width, as they are in most modern Trees, each Path should cover 30° of arc where it meets the edge of a Sephirah. I suppose that there are a number of mathematical ways of figuring out just how to do this, but the simplest and quickest is to use your compass as a divider. What you do is divide the radius of the Sephiroth by four and this will give you approximately one-half of the width of your Paths. (See Proportion Note at the end of this section.) Set your compass arms to 1/8" and use the following procedure to zero in.

To zero in your compass put the centering point on line 'A' just as it leaves Tiphareth on its way to Kether. Now turn the lead point to the right until it touches the outermost part of Tiphareth. Move the centering point of your compass to the center line of the Path of Heh, running between Tiphareth and Chokmah, swing the lead point to the left until it touches the outermost part of Tiphareth. If there is a gap between these two points make the appropriate adjustments on your compass until these points come together. As you mark off guide points for your Paths from the center lines, check your compass frequently against this zeroing reference to make sure that it is holding the same setting. Remember that you need only two sets of guide points to draw the Paths of each of the Pillars and each of the diagonals.

Now that you have your guide points set on the edges of the Sephiroth; start with the three horizontal Paths of Daleth, Teth and Peh. These Paths should be drawn first because they break other Paths which pass behind them. Unless you have these horizontal Paths drawn in first it is easy to overlook them and give yourself an unnecessary erasing job. Next come the Pillars, these and the diagonals which follow should be done with only two straightedge line-ups each, using two sets of guide points as far from each other as possible. This will insure that these Paths will line up correctly and will minimize the chances of error. The final step is to outline the remaining Paths using your guide points, put in any attributions erase all constructions lines and you have a finished Tree of Life.

Proportion Note:

When drawing a Tree of Life there are two ways you can go so far as Path width is concerned. You can say: "I want my Paths to cover exactly 30° of arc when they meet the Sephiroth"; or you can go for internal unit proportion and simply divide the radius of the Sephiroth by four to get your half-width and go strictly by that measurement. On larger Trees this may mean that there are small gaps between Paths which should converge tightly; a broad pen point can cure this on all but the largest Trees.

By far and away the best method is the one given in the body of this section where you divide the radius of the Sephiroth by four and then fudge a littly by zeroing in the compass. This is the easiest and fastest way to get a good looking Tree which will stand up under any but the most rigorous mathematical analysis.

As stated above each of the Paths should cover 30° of arc where it meets the outer circumference of a Sephirah. This is not an arbitrary figure, but one based on the internal proportions of the Tree itself. Thirty degrees or one-twelfth of the circumference of a Sephirah is the only ratio of Path width to Sephirah circumference which will allow the Paths to converge tightly and at the same time allow the center lines of the Paths to cross the center points of the Sephiroth.

When drawing very large Trees you may want to divide the radius of the Sephiroth by 3.82 which will give you a closer approximation of the half-width figure for your Paths. You get something very close to this figure when you zero in your compass as described above. On small Trees, however, the difference in actual measurement is so small that it is not worth the trouble of going through the extra calculation.

Whenever we consider the proportions of the Tree as meaningful symbolism we must keep in mind that many of these proportions are approximations. The idea behind the symbolism of the Tree of Life is, and always has been, to transmit meaningful realizations, knowings and understandings rather than to simply produce a diagram correct to the hundredth of an inch.

If we consider our standard formula as used throughout the Tree we find that the smallest measurement in the Tree is the width of the Paths. For a nine inch Tree the Path-width would be 1/4". If we call this Path-width one unit we will come up with a set of proportions which will cover the entire Tree and will remain constant no matter what size Tree we draw.

The unit proportions of the Tree of Life will be as follows:

Overall Height..... 36 Units.
Overall Width..... 18 Units.
Circumference of the Sephiroth.....12 Units. (Symbolic)
Actual Circumference.....12.56637+ Units.
Diameter of the Sephiroth..... 4 Units.
Radius of the Sephiroth..... 2 Units.

The length of the Paths when figured from the center of each of the two Sephiroth which they connect will be:

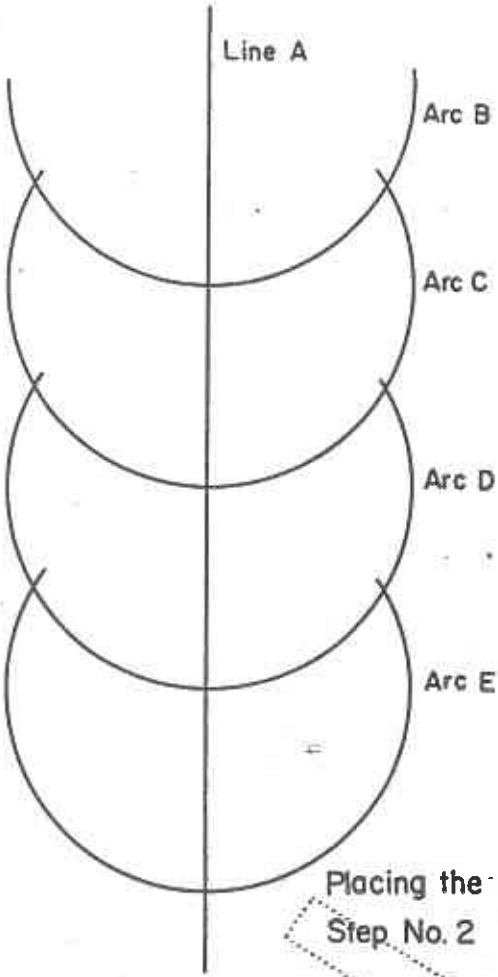
Short Paths (and construction arcs)....8 Units.
Long Paths.....14 Units.
Path of Gimel.....16 Units.

The length of the Paths when figured from circumference of Sephirah to circumference of Sephirah will be approximately:

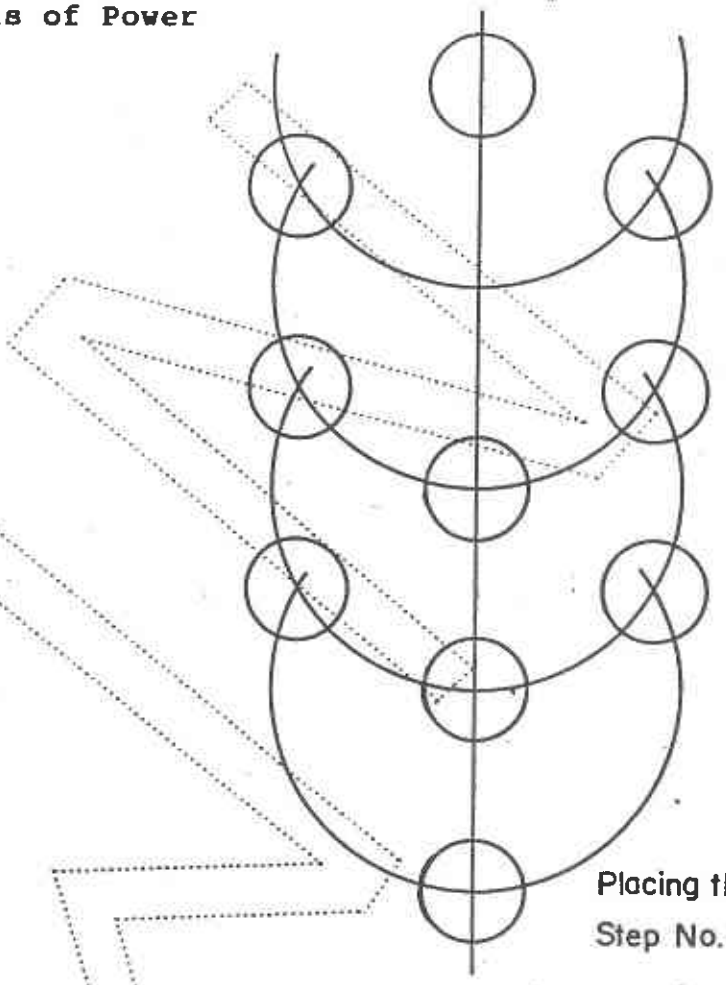
Short Paths.....4 Units.
Long Paths.....10 Units.
Path of Gimel.....12 Units.

HOW TO DRAW THE TREE OF LIFE

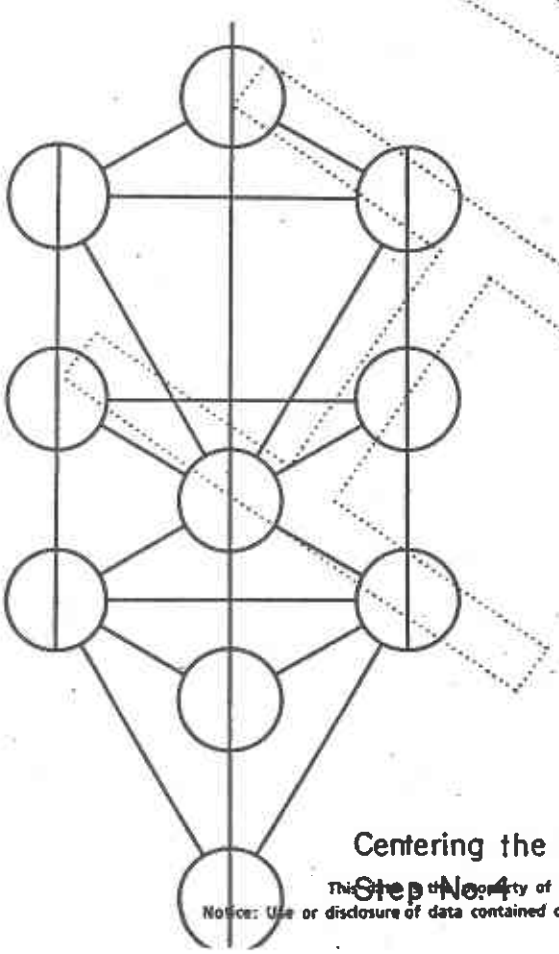
Wells of Power



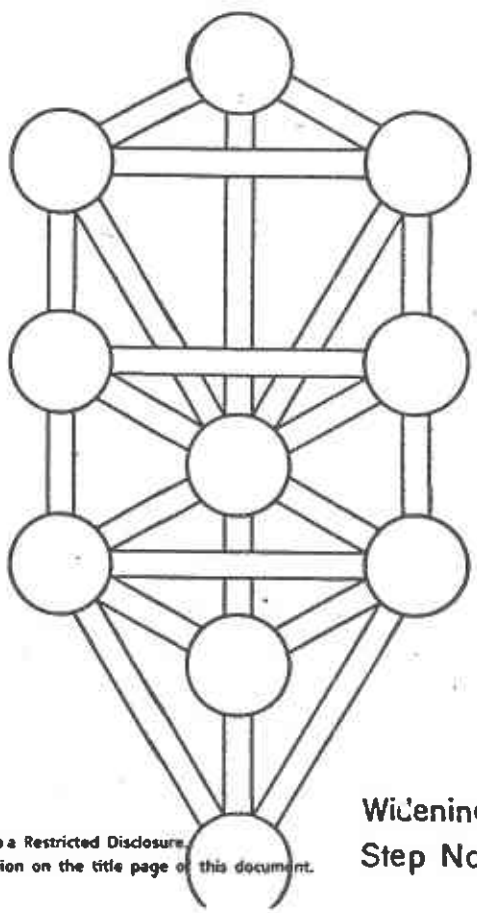
Placing the Arcs
Step No. 2



Placing the Sephirotl
Step No. 3



Centering the Paths
Step No. 4



Widening the Paths
Step No.5