

## Tone Arm Simulator (TS)

1. Light cardboard, 4 1/2" x 16"
2. Line Drawn 1/2" from edge
3. 1/4" Hole, this is the Stylus point. Punch hole after laying out 5.
4. Scale inches from 3. This is the tonearm length.
5. Tracking Angle Scale.

$$X = 4 \tan (\theta)$$

<u>Angle</u>	<u>X inch</u>	<u>X mm</u>
0	0	0
5	0.35	8.9
10	0.71	17.9
15	1.07	27.2
20	1.46	36.0
25	1.87	47.4

6. Overhang scale  $\pm 1.0"$ , 0.1" divisions.
7. Line drawn 3" from left edge.

## Record Simulator (RS)

1. Light cardboard, 3" x 16"
2. Mark for centre of record 2" from right edge of BB.
3. 3/16" circle 1.875" from 2
4. 3/16" circle 2.84" from 2
5. 3/16" circle 3.81" from 2
6. 3/16" circle 4.78" from 2
7. 3/16" circle 5.75" from 2
8. Line drawn on centre

## Base Board (BB)

1. 11" x 16" Board of material that will accept thumb tacks.
2. Line drawn 1" from right edge
3. Line drawn 3" from top
4. Using thumbtack, fasten RS here.

## Using Tracking Angle Analyzer

1. Using a thumbtack, fasten point (2) of Record Simulator (RS) to (4) of Base Board (BB).
2. Position Tone Arm Simulator (TS) over (2) of RS with the edge of TS parallel to edge of BB.
3. Using scale (6) of TS, adjust position of TS for desired overhang or underhang.
4. With the top edge of TS parallel to right edge of BB, fasten TS to BB using scale (4) of TS for tone arm length.
5. Rotate RS and TS to place hole (3) of RS over points (3-7) on RS. (See example below).
6. Read tracking angle using center line of RS.

Pivot Points

