

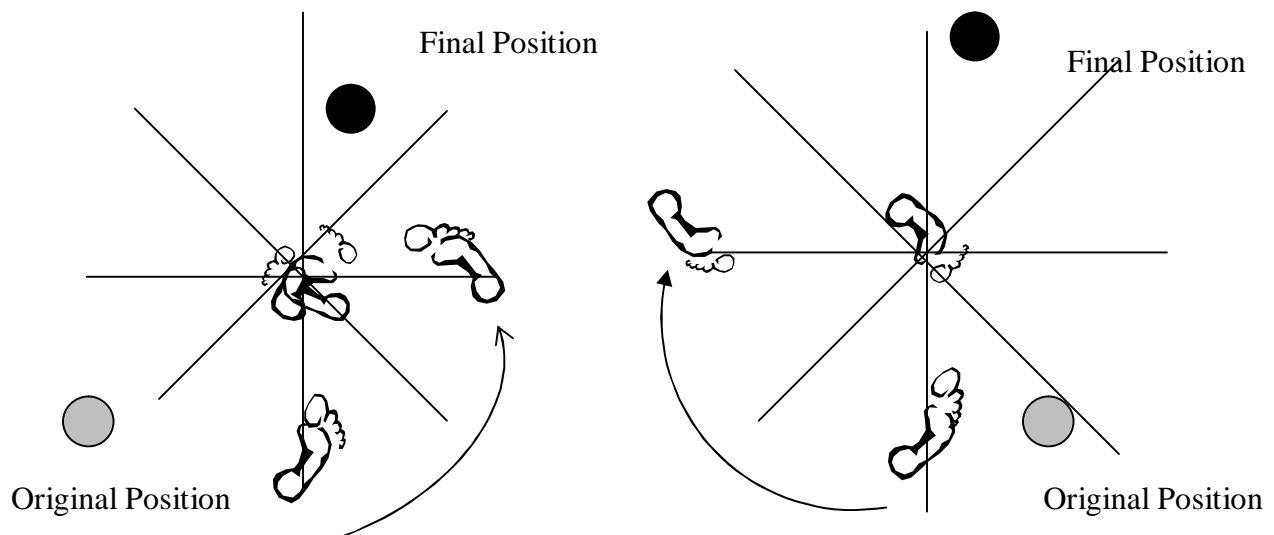


### **Angular Rotations/ Pivot Step**

The pivot step is may be employed as a counter offense /defense maneuver to avoid an attack and position one's body optimally for counter-attack without loosing any ground. As the attacker advance-the practitioner will pivot to the right or left or the front foot. The front foot is planted and the back foot moves through an arc which is consistent with the degree or angle of the pivot. The exact angle of the arc that the back foot travels will depend on the body's position in relation to the opponent and his direction of attack and thus is situational (situational technique V.S self defense technique).. There are a infinite (8) number of pivoting angles, the primary angles are consistent with the eight directions or (combination of the Eight) of the Ba Gua diagram/maps, Example. 45, 90, 135, and 180 degrees. When pivoting, the practitioner will seek to place his or her body at an angle conducive to optimal counter-offense. The advantage of this move is that the practitioner can avoid the opponent's attack with minimal engagement and no loss of ground. The pivot occurs on the ball of the front foot. The movement should be swift and fluid and the body should move as one integrated unit. The body does not bob up and down or wobble side to side. The foot, leg, and body pivot together, as one piece, around the fixed front foot - it is a one-count movement (o step).

The back foot movement and the torqueing of the body around the ball of the front foot occurs simultaneously and all parts of the body stop moving at the same instant(total body method).

Any combinations of pivoting angles and directions is suitable to practice The 90 degree pivot step may be utilized to move to the side (attacking the side) of an opponent. The pivot is timed correctly in this situation, with momentum of the opponent's force will cause him to pass and the player will end up at optimum angle for counter-offense (control and capture the back). The 135 degree step is an excellent maneuver to use in combination with the k'ou bu (step in) step in order quickly position oneself behind the opponent (6 gate) The pivoting angles which are less than 90 degrees are typically utilized to make small adjustments to indirect attack.





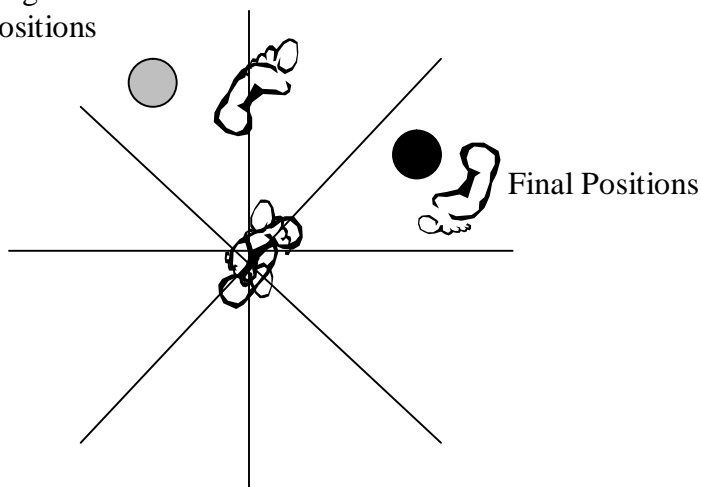
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The pivot step (angular rotation), can be practiced in conjunction with the jump step (1 step) or full step (2 step). Example#1 the player (1 step) longitudinal/forward to simulate/bait offense, then pivot steps to the left or right transverse/or/diagonal to avoiding an opponent's counter-offense (indirect attack). This sequence may be repeated as many times as you wish. Example#2 practiced in a counter/defense- and counter/offense order. The player will first pivot step to the transverse/ left or right, then (1 step) longitudinal/forward and pivot step again to the transverse/right or left. By practicing these two exercises, the practitioner will become accustomed to combining the pivot step with the other stepping maneuvers and the combination of counter offense and immediate offense (indirect attack) will become natural response. Combinatorial analysis, two items (offense and counter offense) in sets of three (as in offense-counter offense-offense) .There are eight possible combinations of (GSS) stepping patterns.

Pivoting Around the Rear Foot ,Pivot around the front foot to the right and to the left/Transverse, More advanced pivoting techniques to practice which involve pivoting on the rear foot. A pivot on the rear foot which is less than or equal to 90 degrees is characteristic paipu/toe out step. A 180 degree pivot around the rear foot is exactly like the full step (2step) backwards.

A 270 degree pivot of the front foot around the rear foot. In executing this 270 degree pivot, the practitioner will bring the front foot back as if to step straight back/longitudinal, however, the foot will continue moving back passed the 180 degree position until it reaches the 270 degree position. This step may be used when the player/opponent is moving towards the practitioner's center (line). This step allows the player/practitioner to step back/longitudinal out of the way (off line) . Pivot the body to set up for counter offense As the front foot is arching back into the 270 degree position, the ball of the foot will drag the ground.

Original  
Positions



### ***Pivot Stepping, the Ba Gua Mandala/Diagram***

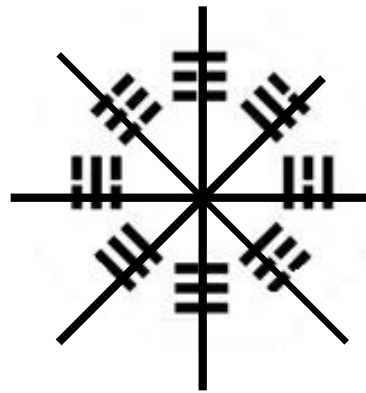
The pivot (circular) steps are associated with the eight directions/transformations of the Ba Gua diagram/map. The pivot (circular) steps adhere to the theory of angular rotation around an external axis. In this case the central axis is the ball of the foot which the practitioner is pivoting on and the practitioner is pivoting on the body's central axis



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rotating around that point. The center of the Ba Gua diagram/map corresponded with the central axis of the practitioner's/player's own body. When researching the movement associated with the pivot step/angular rotation, the center of the diagram is placed at the axis of rotation of the pivot foot. This point will usually located between the central axis's the practitioner's body and the central axis the opponent's/player body

(the third Point). This point (line, surface, space) will correspond with the first point of contact between the player body and the opponent's body. Utilized in offensive maneuvers when moving the center of one's body in towards the center of the opponent's body(controlling the radius). The pivot steps are counter offensive maneuvers the player will utilize to quickly move the center of his or her body out of the opponent's line of attack (off the line). The degree which the player's center will rotate away from the opponent's direct line of attack will depend on the opponent's movement in relation to both direction and velocity. In partner practice the player will work to gain experiential knowledge (knowledge body) of correct timing and optimum angle of the pivot in the pivot step application (situational)



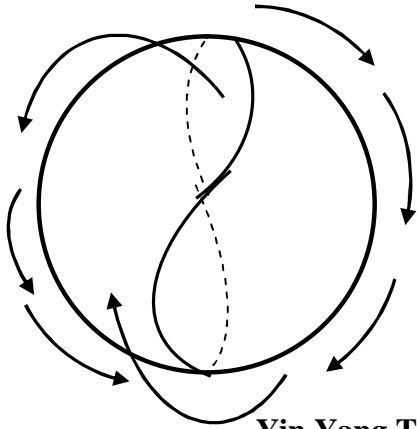
### Angular Rotation around a Central Axis

#### **Circle Turning/Walking Patterns**

The standard circle turning/walking practice in NMS is turning/walking #1 continuously around a single circle of a consistent diameter #2 changing diameter for a period of time ( 15,30 ,60 min), changing directions (counter clock and then clock wise), then walking around the circle in the opposite direction for the same period of time and repeating this pattern. The change of direction used by the beginner player is single palm change (1 point crossing) .the change of direction will become more complex double palm change (2point crossing) and multiple palm changes (three point cross)(. While Turning/walking the player will build a strong balanced orbital energy/power. The change of direction facilitates movement .The complex changes are taught in progressive manner. This practice is only one of many Turing/ circle

Patterns (GSS) which are contained in NMS method. #3 pattern which the player/student will practice is modeled after the Tai-Chi diagram (law of two map).

The palm change (GSC) pattern is executed in the practitioner transitions/transformations through the # 3 middle of the circle . As the practitioner steps around the circle #4 along the circumference of the circle can be added.



**Yin Yang Tai Ji /circle Turning/Walking Pattern**

#5 combing large circles with smaller circles and walking in different spiraling patterns (GSF) Ba Gua Zhang footwork (GSS) as it is applied can become complex. The player sometimes walks in large circles and sometimes in very small circles. The small circles change instantly to larger circles and the large ones rapidly change to small depending on the Tactics and application/situational. These patterns (GSF) are practiced separately and then the Player combines the patterns (combinatory theory). . The player researches the when's, how's and why's of the each different pattern's applications.



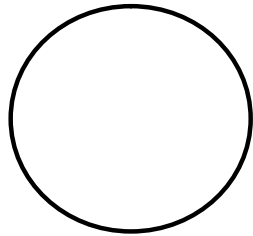
**Multi-Circle Patterns**

Turning/walking circle and Bagua/Eight transformation Map shows linear eight directions, angular rotations around a central axis, and circular movement around a central axis (GSS). In the 8 linear directional steps . the center is practitioner's own body(the player ). The axis of angular rotation steps is a point in-between the practitioner and the opponent/player (the ball of the practitioner's pivot foot) (the third point). The central axis in the circle turning/walk the central axis may possible be the opponent's/player's body. (Variation #1). (Variatrion#2) It can be located at the point of contact between the practitioner and the opponent/player.



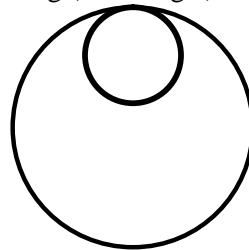
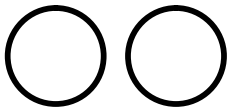
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The 8 directional steps are characteristic of one being in the center and focusing outward (centrifugal). The circle turning/walking practice the perspective of being on the outside and focusing in toward the center (centripetal). Another principle of movement which is associated with the (8 transformation) Ba Gua diagram entails the layer being in the circle's center and focusing outward while moving in circler patterns (orbital power). This principle is important in (spiral method) Ba Gua Zhang body movement and characteristic of movements the player performs with he shoulders and hips rotating around the his central axis. The circle's center can change rapidly and circles can be large or small or change from large to small as in the spiraling Patterns.

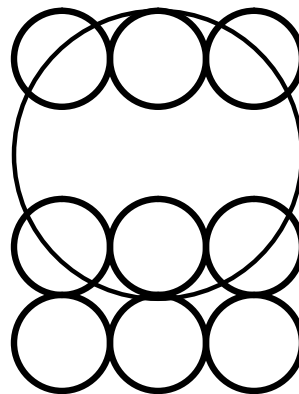
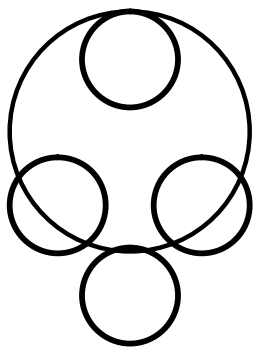


2 two circle

Spiraling (centrifugal)



Spiraling (centripetal)



**Multi circle**

**Nine place**



Stepping used for circular /Turning (walking). The Circle Step in (kou Bu) and Step out

(BaiBu).

*Note\* NMS ,Every step is Tatic and technique .Example Kick ,sweep, trap and ect.*

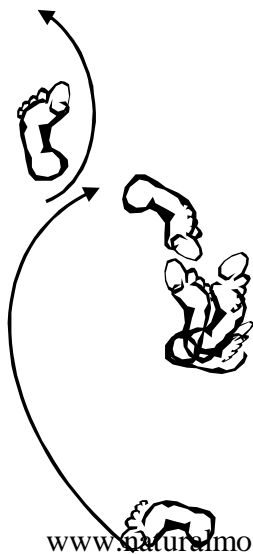
The Eight Directional stepping (Ba Fang Ken Bu) steps, the pivot steps, and the circle walking, toe in (kou bu) hook step and toe out (bai bu) swing step part of NMS (GSS) of (Spiral method) Ba Gua Zhang footwork and mobility (transport system). These foot movements (GSF) are utilized to change direction when walking/turning the circle. The Ba (8) stance is called the "eight stance" because the feet form a pattern similar to the Chinese character for the number eight. When in the eight stance, the weight is the (third point) in front of the player. A variation of the (Ba Bu) "eight" stance is called the (kou bu) "T" stance. This stance the feet form a "T" shape. In the "eight" stance, both feet turn in approximately 45°. In the k'oupu "T" stance one foot turns in more than the other.

The Toe in (kou Bu) and Toe out (Bai Bu) stepping maneuvers are execute in (spiral method form) Ba Gua Zhang forms because these maneuvers (GSS) are highly functional when used in conjunction with a large variety of (GSC) palm techniques. NMS player become very familiar with steps by practicing an exercise that executes different drills, example: successive toe out and toe in steps and the movements become natural.

**NMS (GSS) Toe in and Toe out (Kou Bu and Bai Bu) Exercise:**

The player will move along a longitudinal line from the Toe out stance, the player will first execute Toe in, then Toe out then Toe in again repeatedly. This exercise utilizes the "90 degree" Toe in because when the practitioner steps, the body is facing the direction 90 degrees away from the starting direction. The Toe in, in the circle Turning/walking can be a "45 degree" Toe in or a

"90 degree Toe out. In the "45 degree Toe in, the player takes the Toe in step without. Pivoting on the front foot and thus the body is facing 45 degrees from the direction of original travel. The 90 degree toe in the' player will allow the lead foot to pivot slightly as the rear foot comes forward and toes-in.



The Toe in and Toe out Footwork may be used when executing tight turning movements and/or quick change of direction.

Toe in Variations: a variation requires the player to pivot farther on the front foot as the Toe in step is being executed. Instead of the body ending up facing the 90 angle to the path the student was originally facing, the body pivots 180 degrees during the Toe in step and the player now faces directly opposite the

direction he was originally facing. This step is the "180 degree Toe in. This modifies the simple Toe in and Toe out footwork in accordance



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with the principle of angular rotation around a central point and thus is, in a sense, combining the Toe in step with the pivot step. This theory, there are many different pivoting angles that one can practice (GSS) and in self-defense while executing the Toe in and/or toe out steps. The 45, 90, and 180 degree Toe in steps. Employment of each of these stepping maneuvers (GSF) variations will be dictated by the Position/figure of the opponent/player.

Toe out Variations The toe out (GSS) can be varied and adjusted as the situation (situational-self defense) dictate, the Toe out (GSF) can be similarly modified. The "swinging out" motion of toe out step can be varied to fit any angle between 0 and 180.