

# Explanation of Sin Wave

One of the most important parts of Taekwon-Do is the use of Sine Wave (Hwaldung Pahdo) in almost all of our techniques. We use Sine wave for a number of reasons. It allows us greater power by utilising our body mass effectively and permits greater control over our movements.

The Sine wave is (partly) created by effective use of the leg muscles, which is also known as "Knee Spring". At the beginning of a technique you should "drop" your body weight, and then increase your height before dropping again towards the end of the technique.

To understand this you really need to be able to see it performed and you should see your instructor for a demonstration. Remember that Sine wave and Sine wave motion are difficult to understand and that they are even more difficult to attain in practice. Do not be discouraged, by continually working on this aspect it will become second nature to you to use Sine wave in your techniques, be warned though, there are some techniques that do not use Sine wave for various reasons and you should not "add" your Sine wave to these.

In addition to Sine wave, we also have the Sine wave motion, which is harder to understand. There are a number of different ways of moving in Taekwon-Do and here is a summary of how to use the Sine wave in each case. These have been ordered with the slowest first (to perform two techniques) with the fastest last (to perform two techniques).

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## Slow motion

The Sine wave is performed as usual, beginning with down, then up, and then down again. The movement is performed slowly with slow breathing. This is used to emphasise an important movement and to check balance and control. It also aids muscle development.

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## Normal motion

The Sine wave motion is performed as usual. The first movement is downwards by bending the knees. As you move forward begin to straighten your leg, which will lead to an increase in your height (and therefore potential weight). Once you have reached your apex you will then start to come down and this is where a great deal of the power is generated. This is usually the end of your Sine wave. When performing one technique after another there is a time gap between them, this should not be too long, just enough to clearly indicate that the whole of one move has finished and that the next is about to begin. You should have one breath control for each technique.

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## Fast motion

The Sine wave is performed as usual. The only difference is a split second pause between the end of one movement and the start of the next. This time interval is smaller than with normal speed. You should breathe normally and have one breath control for each technique.

Fast motion are nearly always attacks - mainly two punches

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## Continuous motion

This is performed as usual with the exception that there is NO pause between the end of one movement and the start of the next. You should have one breath control for each technique as usual. You should always start with a block. The main reason for using this kind of motion is to allow an instant response to the attack by either blocking the next technique or issuing your own counter.

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## Connecting motion

This is performed as usual with the following exceptions: There is no pause between techniques, there is only one breath control for all techniques, it is usually impossible to determine where one technique ends and the next begins. Note that there is only ONE Sine wave and ONE breath control. Connecting motion is always with two movements using opposite arms. One reason for using this kind of motion is where one technique "sets up" the opponent for an immediate attack

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