



## Technique

A guitarist is constantly working on his or her technique and there is always room for improvement. These lessons are a great place to continue to work on your guitar technique. Click below left for the best in free Technique lessons available on the web.

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## Alternate Picking

Alternate picking is a guitar playing technique, necessarily used only by pick-users, that employs strictly alternating downward and upward picking strokes in a continuous run. It is the most common method of plectrum playing. If this technique is performed on a single note at speed then it may also be referred to as tremolo picking.

"Good" alternate picking involves a continuous up-and-down motion of the picking hand, even when not picking a note (except when the gap lasts longer than one full up-and-down motion). In this manner, an up-beat (e.g. an even-numbered eighth note or, at faster tempos, sixteenth note) will always be played with an upward picking stroke, while the down-beats are always played with downward picking strokes. This allows for fluid incorporation of legato notes in the middle of picked phrases.

Alternate picking can be heard in almost all styles of picked guitar music, from Jazz to Bluegrass, to Heavy Metal.

It has some advantages and some disadvantages, largely depending on the licks the guitarist is attempting to play. For example, most scalar runs are most easily played using alternate picking. Similarly, the complex, syncopated rhythm guitar patterns found in death metal require a good alternate picking technique to play fast and accurately.

On the other hand, large arpeggios (especially spanning more than one octave) are very difficult to play using pure alternate picking, and almost impossible to play at great speeds, which is why many guitarists choose to employ sweep picking to play these arpeggios. Similarly, some kinds of licks are easier when played using such specialized techniques as legato playing, economy picking, or tapping. Despite this, some guitar virtuosos (especially Al Di Meola and Steve Morse) emphasize the near-exclusive use of alternate picking, even in situations where another technique would be easier, claiming that pure alternate picking leads to a more consistent sound and allows for greater control of tone. (Courtesy of [Wikipedia](#))

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- 🍌 [Alternate Picking \(MoneyChords\)](#)
- 🍌 [Alternate Picking Fundamentals \(Guitar-Dreams\)](#)
- 🍌 [Alternate Picking Technique \(UltimateGuitar.com\)](#)
- 🍌 [Alternate Picking Workout \(WholeNote\)](#)

## Arpeggios

An Arpeggio is a broken chord where the notes of a chord are played in succession to one another, rather than simultaneously. Click below for the best in free Arpeggio lessons and resources available on the web.

### Lessons

- [Arpeggio-Primer \(Guitar- Master\)](#)
- [Arpeggios \(Cyberfret\)](#)
- [Arpeggios \(Dave's Guitar Resources\)](#)
- [Arpeggios \(Guitar Lesson World\)](#)
- [Arpeggios \(Musiclearning.com\)](#)
- [Arpeggios \(Total Guitar\)](#)
- [Guitar Arpeggio \(Learn Classical Guitar\)](#)

### Resources

- [Arpeggio Finder \(Whole Note\)](#)

## Bends

Bending is exactly as it sounds: bending the string to the side by pushing it (towards the sixth string) or pulling it (towards the first string), often while a fretted note is ringing. The first three strings are normally pushed, and the others are normally pulled. This is particularly important on the first and sixth strings: you do not want the string to fall off the fretboard. Whether it is pushed or pulled, the currently-sounded note will be raised in pitch. It is likely that nothing bad will happen — other than a strange and probably undesired (and unpredictable) change in pitch, which can still be disastrous during a live performance!

Many aspiring guitarists cannot bend properly. The *sound* of a bend is more important than how it is actually executed or how it looks, but a bad bending technique usually leads to a bad sound. Your favorite guitarist might bend using just his or her fingertips and you might be inclined to copy this — don't! Your hands can sound every bit as good as your hero's without copying his or her technique. There are two keys to bending properly: proper thumb positioning, and bending with the proper muscles. Do not keep your thumb behind the neck, where it usually is, but bring it up perpendicular to the neck (a position that is *normally* incorrect, but not in the case of bending). Keep the fingers firm. Do not bend your fingers, but push or pull with your forearm. You will hardly see your forearm move, possibly just see a couple of muscles flex. It will feel awkward at first, but if you can bend with the thumb in the proper position and without bending the fingers, you are probably doing it correctly.

Many guitarists will have trouble bending more than 1/4 step (half a semitone) or perhaps 1/2 step (one semitone) with only one finger, especially on frets close to the nut and on the thinner strings. It is much easier to bend with more than one finger, for instance, with the index finger on the first or second fret and the ring finger on the third, and pushing or pulling with both fingers in order to bend at the third fret. More fingers may be used if this is not enough. It should be possible to bend at least a full step (the pitch difference of two frets) this way

### Pre-bending

Bending, whether by pushing or pulling the string, shortens the length of the vibrating portion of the string, and thus always *raises* the pitch of the note. This means it is easier to slide up rather than down in pitch. To create the impression of bending down, the guitarist uses a technique called *pre-bending*, that is, bending *before* the string is struck, then releasing the bend (either gradually or quickly, depending on the intended effect).

### Bend and release

The ideas of bending and pre-bending can be combined for a "bend and release", that is, striking a note, bending it up, then releasing it as you would with a pre-bend. This will often be perceived as a "bounce" in pitch, especially if played quickly. The reverse is also possible: pre-bend, release, and bend. Repeatedly and steadily bending and releasing is called *vibrato*. (Courtesy of [Wikibooks](#))

Click below for the best in free Bend lessons available on the web.

- 👉 [Bending Steel \(Guitar Consultant\)](#)
- 👉 [Bending Strings \(Better Guitar\)](#)
- 👉 [Bends \(Cyberfret\)](#)
- 👉 [Getting a Grip on Bends \(Active Guitar\)](#)

- [In Tune String Bending \(Kevin Downing\)](#)
- [String Bending \(About.com\)](#)

## Hammer-Ons

A Hammer-On is when you play a note, and while it's still ringing, you fret (like a "hammer") a note that's higher on the same string without picking it.

Hammer-ons are used to play *legato*, that is, in a smooth manner, and are also used to help the guitarist to play faster. They are most commonly used in electric guitar work, but can be used in acoustic tunes as embellishments.

Strike an open E on the first string. While the note is still ringing, quickly and firmly press a finger on the third fret. If done properly, a G note should be sounding. This is called "hammering on" the string. Without electric amplification, the hammer-on tends to make the sound quieter — a lot quieter if one hasn't practiced it! This is why hammer-ons are uncommon, but not unheard of, in acoustic playing. The hammer-on can just as easily be played with fretted notes: just play the note normally and hammer onto another (higher-numbered) fret on the same string. (Courtesy of [Wikibooks](#))

Click below for the best in free Hammer-On lessons available on the web.

- [Adding Hammer-Ons to Your Strumming \(Active Guitar\)](#)
- [Hammer-Ons \(About.com\)](#)
- [Hammer-Ons \(Better Guitar\)](#)
- [Hammer Ons \(Guitar Alliance\)](#)
- [Hammer-Ons & Pull-Offs \(Kyle's Virtual Guitar\)](#)
- [Hammer-ons and pull-offs \(Cyberfret\)](#)

## Harmonics

Harmonics are fun sounds to produce. They can be quiet and bell-like, as on an acoustic guitar, or they can be loud and squealy, as on an overdriven electric guitar.

### List of natural harmonics

These will be explained shortly.

- 12th fret: octave above open string
- 7th or 19th fret: Octave plus a perfect fifth above open string
- 5th or 24th fret: Two octaves above open string
- 4th, 9th, or 16th fret: two octaves plus four semitones above open string

There are more harmonics than these, but these are the easiest to produce and the most audible. They are ordered from lowest to highest in pitch.

### Natural harmonics

Natural harmonics are the easiest to produce. A good place to begin is the 12th fret of the first string. With your fretting hand, lightly touch the finger against the string directly above the 12th fret. Do not hold it down, just touch it. Then strike it with your picking hand, and immediately release the string with your fretting hand. If executed properly, the result should be a high-pitched, ringing E. It will be the same note as pressing against the fret will produce. Try it again at the 7th, 5th, and 4th frets, as in the list of natural harmonics: each will produce even higher sounds, much higher than can be produced on the guitar without using harmonics! However, each will also be quieter, so the higher harmonics may be nearly inaudible without overdrive.

### Pinch harmonics

A.K.A. Artificial Harmonics (though there is really nothing artificial about them). This is an advanced technique and was popularized by Billy Gibbons, Zakk Wylde, and many others as early as the 1970s including many Heavy Metal artists. These harmonics follow the same principles of physics as a natural harmonic, the difference being how the harmonic is produced. In this case a note is struck in a downwards motion with the pick and in the same motion the string is touched (one might really say brushed) with the edge of the thumb that is holding the pick. Pinch harmonics are most effective and audible using an electric guitar with overdrive or distortion and in some cases these harmonics are virtually inaudible using a clean (not distorted or overdriven) electric guitar or an acoustic. It can sound good when used properly even without much overdrive (Billy Gibbons is the master of low overdrive Pinch Harmonics) but it's not always clear or detectible. Use overdrive or distortion for best results especially while learning and practicing this technique.

With regards to difficulty: this technique, although rewarding, is mostly rewarding only in advanced situations (soloing and intense expressive riffing). It is difficult enough to easily frustrate a beginner and some intermediate players and since there are so many more rewarding and useful techniques worth spending time on as a beginner (scales, soloing, blues, riffing, strumming patterns), this technique is only recommended for intermediate or advanced players.

As mentioned above these harmonics are produced by striking a note with the pick and touching the string with the picking thumb. Grip the pick so that the tip barely peeks out between your fingertips (this is why they are called "pinch" harmonics). It's easier when you are fretting a note with the left hand so try fretting a note (perhaps the 5th fret on the 4th (D) string), and plucking the

string just below the neck pickup pole pieces (maybe 1/8" toward the bridge from the pole pieces). With luck the artificial harmonic will ring, but if not don't despair.

The position of the plucking along the length of the string is one of the most important parts of this technique. While with regular picking the position of the picking along the string can make slight variations in the sound of the note, when executing pinch harmonics the right position is vital and tiny positional differences can make entirely different harmonics. So try adjusting the picking hand just millimeters up and down the string around the area of the pickups.

Try imagining the pick and your picking thumb plucking the string at the same time although the thumb is really just brushing past it. Consider it to be really one motion. Try thinking of your thumb and the pick as one entity and instead of picking straight down, pick down and a little bit (millimeters) out away from the face of the guitar so your picking motion is a sort of 'letter J' out from the face of the guitar and so the thumb brushes past the string and remember that the thumb should only touch the string for an instant just like the pick does.

This technique requires practice. Try executing pinch harmonics while fretting different notes and by striking the string in slightly different places all around the pickup area of the guitar. Many kinds of harmonic ringing sounds may be produced.

Without a pick, this technique may be simulated by plucking the string with the fingertip and lightly touching it with the fingernail, but this is even trickier and not very useful in practice.

These harmonics, as opposed to natural harmonics, end up being much more practical to use while playing and when mastered can be used boldly like Zakk Wylde making the harmonic part of the riff, or subtly and possibly unintentionally to add color and character to the notes or chords while playing almost anything.

Pinch harmonics can easily and effectively be combined with other techniques, such as bending or vibrato.

To hear pinch harmonics in action check out the following:

- Ozzy Osbourne's Ozzmosis (and several other albums) features Zakk Wylde who is the king of pinch harmonic with masterful vibrato so check out Track 6 Tomorrow from 1:20 to 2:00 ... I count 5 awesome pinch harmonics of different notes in that clip.
- In the movie Rock Star at the beginning, the lead guitarist in Blood Pollution (the Steel Dragon cover band) is "not hitting the squeal". The squeal they're speaking of is a pinch harmonic (and is actually Zakk Wylde playing the squeal since he's in the movie).
- One of the best examples of a bend and a pinch harmonic is Judas Priest's Lochness off the album Angel of Retribution at about 1:10.

Don't despair if you can't get harmonics as clear as Judas Priest or Zakk Wylde, they've got equipment made just for making sounds like that. Some pickups pick up pinch harmonics better than others and Judas Priest and Zakk Wylde both have EMG pickups, which are one of the hottest pickups. Hot pickups (EMG, Duncan JB, Duncan Live Wire, Bill Lawrence 500XL, etc.) do an excellent job of picking up pinch harmonics. They both also have expensive high gain amplifiers. Try this stuff out at the local guitar shop if you want a taste (warning it's easy to get spoiled/hooked!).

### **Tapped harmonics**

This technique, like tapping itself, was popularized by Eddie van Halen. Tapped harmonics are an extension of the tapping technique. The note is fretted as usual, but instead of striking the string, the string is tapped at one of the frets listed in the natural harmonic list. Do not hold the string

down with the tapping hand, just bounce the finger lightly on and off the fret. This technique can be extended by fretting a note, then tapping relative to the fretted note. For instance, hold the third fret, and tap the fifteenth fret, for the twelfth fret harmonic, because  $12+3=15$ .

### **Other techniques**

A final technique is a sort of combination between the natural and tapped harmonic techniques. Fret the note normally, and place the picking hand index finger on a natural harmonic relative to the fretted note (just as in tapped harmonics). Pluck the string with another finger and release the index finger, just as if producing a natural harmonic. (Courtesy of [Wikibooks](#))

Click below for the best in free Harmonics lessons available on the web.

- [Harmonics \(Guitar Lesson World\)](#)
- [Harmonics \(KVGL\)](#)
- [Harmonics 101 \(Guitar Guitar II\)](#)
- [Harmonics \(Better Guitar\)](#)
- [How To Play Harmonics \(Acoustic Guitar\)](#)
- [Natural Harmonics \(Cyberfret\)](#)

## Legato

In musical notation legato indicates that musical notes are played smoothly. That is, in transitioning from note to note, there should be little to no silence between notes. Legato technique is required for slurred performance, but unlike slurring, legato does not forbid rearticulation. The legato is commonly shown in standard notation as either notes that are set off from the others by being written in a smaller manner than the others. Or, it would also be shown as an arch from one note to another, different note. One example of legato would be in the basic drumming rudiment the Flam.

In guitar playing legato usually refers to slurred notes, exclusively to hammer-ons and pull-offs. An electric guitarist using legato technique will generally use legato to play notes that are close and on the same string to the note that the guitarist starts the legato on. All other notes are played using the techniques mentioned. Many electric guitar virtuosos, usually shredders, are well-versed in this technique, as it allows for rapid and also "clean" runs.

In violin and string music, legato usually refers to notes played with a full bow that are played with minimal space between notes. This is often achieved through controlled wrist movements of the bowing hand and is often masked and enhanced with vibrato. (Courtesy of [Wikipedia](#))

Legato means that notes are to be played smoothly. That is, in moving from note to note, there should be no silence when changing. Click below for the best in free Legato lessons available on the web.

- [Legato Playing - Step by Step Technique Vol.I \(Guitar Noise\)](#)
- [Legato Playing - Step by Step Technique Vol.II \(Guitar Noise\)](#)
- [Legato Playing - Step by Step Technique Vol.III \(Guitar Noise\)](#)
- [Legato Phrasing \(Better Guitar\)](#)
- [The Legato Lesson \(BluesLessons.net\)](#)

## Muting

Muting is the use of your hand to muffle, deaden, or stop the sound of the strings (or notes) you're playing. There are two kinds of muting, the palm mute and the fret-hand mute.

Muting a string is simple: with the fretting hand, touch the string with a finger, but do not press it down, and strike the string. It is usually best to do this where a harmonic will not result, but strings can be muted at harmonics for special effect. In tablature, muted notes are marked with an "x" instead of a fret number.

Palm muting may or may not make the pitch of the string discernable. Very lightly rest the palm of the hand on or near the bridge, then fret and strike strings normally. Palm-muted notes are sometimes notated the same way as muted notes when the pitch is not discernable; otherwise fret numbers are given normally and the muted notes are marked "P.M." in tablature. (Courtesy of [Wikibooks](#))

Click below for the best in free Muting lessons available on the web.

- [Chord Muting and Palm Muting \(Hoos Guitar Tuition Page\)](#)
- [Muting \(Better Guitar\)](#)
- [Palm Muting \(About.com\)](#)
- [Palm Muting \(Cyberfret\)](#)
- [Palm Muting \(Guitar Noise\)](#)
- [Palm Muting \(KVGL\)](#)

## Pull-Offs

A pull-off is a stringed-instrument playing technique performed (usually on an electric guitar) by "pulling" a fretting finger off the fingerboard. A pull-off is almost always performed on a string which is already vibrating (a normal note having already been played on it). When the fretting finger is pulled off (usually exposing another fretting finger on the same string, a few frets down the fingerboard) the note playing on the string falls to that corresponding with the new, longer vibrating length of the string. Pull-offs are common both on fretted and unfretted instruments, and are often used to sound grace notes: as the string is not picked or bowed again to produce the sound of the second note, the transition from one to the other sounds gentler and less percussive.

There are disadvantages, however, to performing pull-offs. In the transition between the initial and final notes, the string vibrates in an anharmonic manner for several cycles, producing a slight "quack" sound (which is particularly audible when the interval of the pull off is large). This transition also consumes some of the vibrational energy in the sounded string, and so the second note is generally much quieter than the original. On most instruments this means the second note has little sustain, and may be inaudible altogether. In consequence they are often used for grace notes, usually in conjunction with multiple hammer-ons and strumming or picking to produce a rapid, rippling effect. In rock and heavy metal music, where overdriven amplifiers ensure the second tone remains audible, pull-offs can be used for the primary sound (as opposed to their use in acoustic music, which is primarily as an embellishment).

In a variation of the technique, the pulling-off finger is dragged slightly across the face of the string while performing the pull-off. This results in the string being gently sounded, either by the player's finger callus or by their fretting-finger fingernail. This increases the volume and sustain of the pulled-off note, although the sound of the fretting finger dragging over the string may be audible on both an amplified instrument and on a brightly-strung acoustic instrument. (Courtesy of [Wikipedia](#))

A Pull-Off is a note that is played by pulling the fret hand finger away from a string at an angle so that the fingertip picks the string allowing the new note to sound. Basically, A Pull-Off is the reverse of a Hammer-On. Click below for the best in free Pull-Off lessons available on the web.

- [Pull-Off \(Better Guitar\)](#)
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- [Pull-Offs \(Guitar Alliance\)](#)
- [Pull-Offs \(KVGL\)](#)
- [Pull Offs Done Correctly \(Guitarsite.com\)](#)

## Rakes

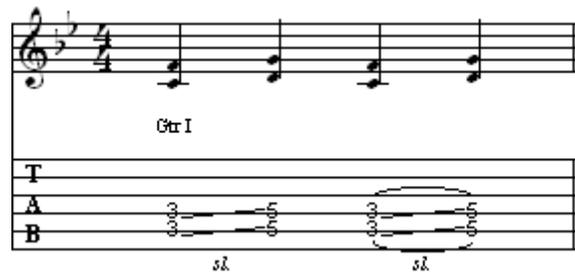
Raking is not a kind of muting, but a technique for applying it. It is vaguely related to sweep picking, but instead of an arpeggio, the result is usually a single percussive-sounding note. (However, sweep picking is sometimes incorrectly notated as a rake in tablature, and sloppy sweep picking may accidentally become a rake.) Between two and four strings are struck, only one containing the desired note and the rest muted. Rakes may be notated in various ways; the most common way is to add muted grace notes, possibly adding the word "rake" to the tablature for clarification. (Courtesy of [Wikibooks](#))

Click below for the best in free Rakes lessons available on the web.

 [Rakes \(Cyberfret\)](#)

## Slides

The slide is one of the simplest guitar techniques. There are two kinds of slides: shift slides and legato slides. In a shift slide, a note is fretted, then the fretting finger slides up or down to a different fret, and the string is struck again. A legato slide differs in that the string is struck only for the first note.



The first slide pictured is a shift slide; the second is a legato slide. A few tablature writers do not distinguish between the two slides, using only shift slide notation. The abbreviation "sl." for slide may be omitted. When sliding from a higher fret to a lower fret, the slanted lines are usually changed to have a downward slope instead of an upward slope, to emphasize the sliding "down". It is possible to slide up from an open string, but this often does not sound as clean because this requires a hammer-on at the first fret (or for really fast slides, a higher fret) before sliding up. Likewise, it is possible to slide down to an open string but it requires a pull-off at the first (or some other) fret.

In Internet tablature, a slide from the third fret to the fifth might be written like any of these:

3/5

3>5

3>s>5

Internet tablature rarely distinguishes between the two kinds of slides.

Less commonly, tablature can instruct the guitarist to "slide into" or "slide out of" a note. In printed tablature, they are notated identically except, in the case of slide-into, the first note is omitted, and in the case of slide-out-of, the second note

is omitted. In other words, the note slides in from nowhere, or out to nowhere. It simply tells the guitarist to quickly slide from or to an arbitrary point, usually only a few frets away. (Courtesy of [Wikibooks](#))

Click below for the best in free Slide lessons available on the web.

- [Benefits of Slide Guitar \(Guitar Noise\)](#)
- [How to Play Slide Guitar \(eHow\)](#)
- [Learn Single-String Slide Melodies \(Acoustic Guitar\)](#)
- [Learn To Play Slide Melodies With Bass Notes \(Acoustic Guitar\)](#)
- [Slides, Slides, and More Slides \(Whole Note\)](#)

## Slide Guitar

A slide is a metal/glass/ceramic tube which fits over a finger (usually the ring finger or little finger, but any will work). If you want to mess around but do not have a slide, a battery can work to get a good sound, but you will not be able to fret other notes too easily. *Do not press the string down.* The slide rests on the string, not enough to give fret buzz, but enough to stop the string buzzing against the slide.

Practice getting a crisp note without sliding first. Because the slide rests on the strings, the slide playing a single note should be directly above the fret, not behind it as with the fingers. Usually the slide guitarist keeps the slide moving backwards and forwards slightly at all times.

Slide guitar works best in, Open G and Open D being the most common. (Courtesy of [Wikibooks](#))



Pictured above is the popular [Dunlop Pyrex Glass Slide](#).

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- [Acoustic Slide Guitar \(Guitar Noise\)](#)
- [Bottlenecking: How To Take Your First Slide Into The Blues \(Acoustic Guitar\)](#)
- [History And Origins Of The Slide Guitar In The Blues \(Guitar Noise\)](#)
- [Slide Guitar Basics: Developing Clean Technique \(Guitar Player Magazine\)](#)
- [Slide Guitar Lesson \(Access Rock\)](#)
- [Slide Guitar Lessons \(WholeNote\)](#)
- [Slide Guitar Tips and Tunings \(Guitar Lesson World\)](#)
- [Slide Guitar 101 - Seven Secrets for Beginners \(Guitar.com\)](#)

## String Skipping

String Skipping is the playing of a sequence of notes, usually arpeggios, by skipping strings. Click below for the best in free String Skipping lessons available on the web.

- 👉 [String Skipping \(MoneyChords\)](#)
- 👉 [String-Skipping Pentatonic Patterns \(Active Guitar\)](#)
- 👉 [String Skipping \(Guitar Tips\)](#)
- 👉 [String Skipping \(Ultimate Guitar\)](#)

## Sweep Picking

Sweep picking is a technique used on the guitar in which a "sweeping" motion of the pick is combined with a matching fret hand technique in order to produce a specific series of notes which are fast and fluid in sound. Despite being commonly known as sweep "picking" both hands perform an integral motion to achieve the desired effect.

### Explanation of Technique

The fret hand portion of sweep picking can be described as when multiple, adjacent strings are "articulated", or acutely controlled by the fretting fingers, and thus sounded in succession without ringing together (as opposed to barre chords in which all strings are held down throughout the pick stroke). The fingers cannot hold down multiple strings at once nor can they make individual fretting actions, the motion is seen as a rolling of the fingers in the direction of the desired notes across the fretboard, rather than up or down the neck. In terms of placement, the fretting hand assumes a shape much like a chord over the fretboard when in motion but instead of completely lifting away, the fingers have to first fret the note to make a sound, then make a slight but immediate raising off the fretboard so as to mute the note by staying in slight contact with the string. This motion of first fretting and then leaving the fingertip in contact with the respective string while simultaneously fretting the next string with another finger tends to create a habitual rolling motion that when perfected can be played at impressive speed due to muscle memory. It is when this motion is done clearly, fluidly and at speed that it is seen as the actual technique.

In relation to this fretting motion, the pick hand performs a single broad stroke all the way down and/or all the way up, much akin to the strumming of a chord. The major differences between strumming and sweeping are the meticulous timing required to coincide with the fret hand's motion and the fact that the pick is "pushed" (in the case of a downstroke) or "pulled" (in the case of an upstroke) into each string, essentially knocking into each following string, whereas in strumming a lighter, more rhythmic, and often faster stroke is used to play all the notes in unison. The player must be sure that although fast and fluid in nature, each string in the sweep must be sounded individually in relation to the note the fret hand is currently fingering. Thus the player must take care not to sweep too fast or too slow for the fret hand. This requires a considerable amount of skill and practice.

### Application

The technique is almost exclusively applied for arpeggios, with a common shape being the one or two octave stacked triad, or in scalar terms the first (tonic), third (mediant) and fifth (dominant) of a scale, repeated twice with an additional tonic, added to the highest point in the shape. For example, an A Minor stacked triad would notate as A-C-E-A-C-E-A. When these series of notes are played quickly up and down as an arpeggio they are notably classical sounding as opposed to more Blues based progressions. The ability to move the shape of an arpeggio up and down the fretboard in order to, or because of, a change in keys lends itself to being the primary choice of guitar players, helping ease the use of what is considered a difficult technique of guitar performance.

Sweep picked licks (lead phrases) were primarily popularized by a host of "Shredders" during the 80's Neo-classical boom, such as Yngwie Malmsteen, Frank Gambale, Tony MacAlpine, Vinnie Moore, Michael Angelo Batio, Jason Becker and Marty Friedman, although it should be noted artists as diverse as Luca Turilli, Steve Vai, John Petrucci and Alan Holdsworth often use sweep picking in their compositions. Compared to other techniques often used by "shredders" such as tremolo picking, few strokes are required in sweep picking, although all sweeps can be seen as a minimum of 3-5 strokes. Each time the pick strikes a string could be considered a stroke in itself. In certain instances, however, legato is used to sound notes instead of an actual pick stroke,

notably in the upper and lower sections of an arpeggio where successive strokes on the same string in a row would effectively negate the natural sweeping motion in question. This comes into play whenever a certain string has to sound two notes in the shape due to the natural limits of a fretted string instrument.

However, as with all guitar techniques, each individual player integrates the technique into his existing repertoire and thusly, certain guitarists may use legato where others will have a natural tendency to double pick these strings. This in itself can be seen as separate yet related idea or technique, due to the obvious differences in the sound of legato versus struck notes, as well as the shift in the timing of the entire arpeggio. Furthering the idea, most players who master the basic sweep picking pattern will use only parts of it or alter the technique to purposefully achieve a certain lick. In this sense, sweep picking is not so much a concrete action such as the aforementioned tremolo picking, but instead is a technical idea with many possible applications.

### Examples

A common way to break the technique up is the use of the three string sweep arpeggio done on the upper three or "skinniest" strings, more so than the lower, "thicker" strings due to the awkward motion necessary and general lack of clarity in comparison to the higher notes. In the case of the upper three string sweep, we see the arpeggio as the upper register of a standard 5 string sweep, where the notes for A minor would be, in an ascending order, A-C-E-A-C-E-A. Beginning on the middle tonic of this progression, the player may sweep first up the scale and then back down to resolve on the initial tonic. This would notate as A-C-E-A-E-C-A. Written in a tab form for the 12th position, it would be seen as:

```
1-----12-17-12-----
2-----13-----13-----
3---14-----14---
4-----
5-----
6-----
```

Now if we add on the lower octave of the arpeggio, the complete shape (in this particular fingering) is seen as:

```
1-----12-17-12-----
2-----13-----13-----
3-----14-----14-----
4-----14-----14-----
5---12-15-----15-12---
6-----
```

Note how in the middle of the sequence, on the 3rd and 4th string, we need to finger the same fret for both strings. By design we also have more fingerings than we do actual fingers, however both of these problems are solved by fretting the initial string (4th on the downstroke) with the tip of the ring finger, and the rolling into the next string fretting it with the pad of the same finger. When we are in the returning upstroke, we fret the 3rd string first obviously, simply reversing the rolling action from before. Also note on the lowest and highest strings in the shape, two notes must be played immediately following each other but on the same string. This is where the general use of legato, etc comes in so that a fluid picking motion is sustained. The sounding of these notes in the arpeggio may be accomplished through any number of techniques, including change in pick articulation, upstroke or downstroke, legato techniques (known as hammer-ons or pull-offs), or in some instances legato slides, rarely used because of the acute control necessary to slide to a precise point on the string. Steve Vai and Shane Gibson are two artists who can use this fluidly. Sweeps may also be continued to the next note via means

of tapping (as used by Michael Angelo Batio and Tony McAlpine), and may facilitate the ability to play passing notes outside of the classic arpeggio sequence. Here are the notes of an A minor triad; While the first six notes follow the arpeggio, the E would be tapped, thereby opening an avenue through which the D,C, and B notes may be more easily sounded via pull-offs.

"= Tapped ()= Pull-off.

i.e. A-C-E-A-C-"E"-(D)-(C)-(B)-A-E-C-A

Ascending Descending

Notice that while the duration is extended, some of the fluidity that an arpeggio is naturally endowed with is lost due to the inclusion of passing tones which change the intervallic leaps in the "embellished" arpeggio. This also undermines the classical tone of the passage many people look for.

Ultimately sweep picking, once mastered, can be applied to virtually any idea, arpeggio or otherwise, and is considered amongst most guitar players as one of the signs of guitar mastery and virtuosity. (Courtesy of [Wikipedia](#))

Sweep Picking, which is also known as "Economy Picking", is the rapid picking of each note of a chord instead of strumming it. Click below for the best in free Sweep Picking lessons available on the web.

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## Tapping

Tapping is a playing technique (generally associated with electric guitar playing, though the technique can be performed on any string instrument) executed by using the fingers of the picking hand to tap the strings against the fingerboard, sounding notes. Tapping (also known as a two-hand hammer-on, or the redundant "fingertapping"), performed in conjunction with normal fingering by the fret hand, facilitates the construction of note intervals that would otherwise be impossible using the fretting hand alone. Tapping usually incorporates pull-offs as well, where the finger that just tapped the fingerboard to sound a note is then swept off with enough lateral motion to sound that same string again — this time on a lower note than the tap (fretted by another finger before the pull-off, or simply left open).

Perhaps the most famous employment of tapping is the short piece "Eruption" on the first Van Halen album, which features very fast tapping triads and formed the blueprint of heavy metal lead playing throughout the 1980s. While Eddie Van Halen is generally credited with inventing tapping, the practice had existed in some form or another for centuries; Paganini utilized similar techniques on violin. A similar technique is used in Turkish folk music on *bağlama*, which is named *selpe*. Credit for the first application of this classical technique to popular music may more accurately be given to Steve Hackett of Genesis, who used the technique both live and on recordings in the early 1970s. Ace Frehley of KISS has used tapping on solos before Van Halen's debut, as has Angus Young, although he usually does one-handed tapping (such as at the end of the solo to "Dirty Deeds Done Dirt Cheap").

A related technique is "tapped harmonics", where the fret hand acts as a barre, while the harmonic is tapped. Eddie van Halen does this in the acoustic guitar solo "Spanish Fly".

Stanley Jordan uses a style similar to tapping called "touch guitar", where the pick hand is used to play lead while rhythm is played simultaneously with the fret hand.

The Chapman Stick is an instrument built exclusively for tapping. The Warr guitar is also built for tapping, though not exclusively. Both instruments use lower string tension and low action to increase the string's sensitivity to lighter tapping.

An earlier recorded example before Van Halen is on Orchestra Luna's only album *Orchestra Luna*, on the outro to "Doris Dreams". Randy Roos is the guitar player.

Even in the '80s hair metal in which tapping had its heyday, tapping on the bass guitar was rarely heard, the most famous practitioners being Billy Sheehan and Stu Hamm. Michael Manning brought the technique to New Age music in his early recordings with Windham Hill. Dream Theater bassist John Myung frequently uses this technique on bass guitar.

Two-handed tapping is rather a progressive approach to play polyphonic/homophonic music on a guitar by using eight (and even nine) fingers. Two-handed tapping applies the concept of playing a piano. For example, the right hand plays the treble melody while the left hand plays accompaniment. Therefore, it is possible to play piano scores (like J.S. Bach's two-part invention). The advantage is that it enhances the flexibility of playing a guitar, while the main disadvantage is the lack of change of timbre. Eddie Van Halen incorporated this technique into modern rock guitar with the solo from "Judgement Day", and patented a pop-out stand to use to employ this technique. Adam Fulara inspired a playing method called "Portato" to two-handed tapping. It can increase the ability to control the change of dynamic for tapping. Since the first note usually sounds the loudest, (unwanted in some music like jazz), controlling of the dynamic is an important topic in two-handed tapping. T.J. Helmerich is another two-handed, 8-finger tapping guitarist. You can hear his work on albums by Garsed&Helmerich and on the Uncle Moe's Space Ranch albums.

A outstanding master employing exclusively this technique to an original blend of mainstream jazz, Turkish, Uzbek and Balkan folk music and classical music is Enver Izmailov.

During the 1980s two-handed tapping had developed much further with players such as Nuno Bettencourt and Steve Vai using multiple strings and fingers to stretch over multiple octaves.

Modern bands like The Dillinger Escape Plan often use extreme form of tapping. This form can be found in many of their songs, good example of which can be heard at the beginning of their debut album Calculating Infinity where the guitar players use fingertap with 3 fingers on each hand. (Courtesy of [Wikipedia](#))

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## Tremolo

Tremolo means a modulation in volume; in the context of stringed instruments, usually refers to repeatedly striking or bowing a single string in a steady rhythm, especially the fastest rhythm the player can maintain. (This technique is particularly common on the acoustic mandolin.) In guitar literature, this is called *tremolo picking*, and one of the few places the term "tremolo" is consistently used "correctly" in guitar literature (whose convention usually reverses tremolo and vibrato). This technique has nothing to do with a "tremolo bar" (really a vibrato bar) or a "tremolo" effects box.

Tremolo picking, though appearing hard at first, is actually quite easy. It is merely alternate picking at a faster speed. To start off, a pick makes tremolo picking much easier and is highly recommended when attempting it, but even though most people find tremolo picking much easier with a pick, but it is nevertheless possible without a pick. The best way to hold your pick is inbetween your thumb and the side of the first knuckle of your pointing finger, but if you feel more comfortable holding it another way, such as with your thumb and middle finger then go ahead.

An important aspect of tremolo picking that many beginners fail to realise is that you must have a relaxed grip on the pick, as when you try to pick when holding the pick tensely, you will find that the pick hits the string harder therefore making it harder to pass through the string, causing it to sound sloppy. Maintaining a relaxed grip becomes harder when playing faster, but you will quickly get used to it.

When tremolo picking make sure you use your whole forearm and not just your wrist, as this will make it much easier to pass through the string. Also, when you pick the string, make sure your hand doesn't go to far away from it, as this will slow you down. The impact from hitting the string usually forces your hand to leave the string, but after practicing a it more, your hand will get used to it. (Courtesy of [Wikibooks](#))

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## Trills

The trill is a musical ornament consisting of a rapid alternation between two adjacent notes of a scale (compare tremolo).

In modern musical notation a trill is generally indicated with the letters *tr* above the trilled note. This has sometimes been followed by a squiggly line, and sometimes in the past, the squiggly line on its own was used. The following two notations are equivalent:



Both the "tr" and the squiggly line are necessary for clarity when the trill is expected to be applied to more than one note (or to tied notes). Also, when attached to a single notehead in one part that corresponds to smaller note values in another part, it leaves no room for doubt if both the letters and the line are used.

The usual way of executing a trill is to rapidly alternate between the note indicated and the note directly above it in the given scale (unless the trill indicates an accidental).



Listen to an example of a short passage ending on a trill. The first time, the passage ends in a trill, and the second, the passage does not.

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It should be noted that this is an approximation of how a trill might be executed. In many cases, the rate of the trill will not remain constant as indicated here, but will start slower and become more rapid. Whether a trill is played in this way or not is largely a matter of taste.

The number of alternations between notes can vary according to the length of the note in question. At slower tempos a note will last longer, meaning more notes can be played in the trill, but with a fast tempo and short note a trill might be reduced to nothing more than the indicated note, the note above and the indicated note again.

Trills may also be played beginning on the note above the one indicated (the *auxiliary note*). Additionally, a trill is often ended by playing the note *below* the one indicated followed by the note itself.

Trills are often indicated in tuned percussion as well, especially timpani, in which case they are calling for a tremolo or roll.

## Baroque

In the Baroque period, a number of signs indicating specific patterns with which a trill should be begun or ended were used. In the *Klavierbüchlein für Wilhelm Friedemann Bach*, Johann Sebastian Bach lists a number of these signs together with the correct way to interpret them.

Unless one of these specific signs is indicated (and beyond the Baroque period they are very rare), there are no definite rules about whether a trill starts on the main note or the auxiliary note and whether the above alternative ending or some similar alternative beginning is used. However, in general, classical music before and during the time of Mozart is executed beginning on the auxiliary note, and music from after the time of Mozart starts on the main note. These factors, together with the overall rate of the trill and whether that rate is constant or variable, can only be determined by considering the context in which the trill appears, and is usually to a large degree a matter of opinion with no single "right" way of executing the ornament.

Generally, the note to be trilled to is determined by the key signature. For example, in C major, a trill on E would be a trill between E and F. If the composer or arranger wanted a trill to F-sharp, he would have to add a small accidental (a sharp in this case) above the "tr."

The trill is frequently found in classical music for all instruments, although it is more easily executed on some than others. It is relatively easy to produce a trill on the piano, but on the trombone it is produced by quickly alternating partials. On the clarinet, trills across the break are found only in virtuoso literature. (Courtesy of [Wikipedia](#))

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## Vibrato

Vibrato is a wavering tone obtained by shaking the finger on the string which it is fretting. It is an effect which helps give extra "life" to notes, especially sustained notes, by changing their pitch. The techniques are not commonly used on the acoustic guitar or general rhythm playing. However, it is *extremely* important to many styles involving distorted guitar, e.g., rock or metal, even when playing rhythm (though, in that case, vibratos are usually embellishments).

Players of many instruments, including the human voice, use vibrato to help add expression to sustained notes. Vibrato is performed by rapidly bending the string back and forth, causing a modulation in pitch; therefore, all of the information above about bending applies here. A small, subtle vibrato might not require the assistance of other fingers; the fretting finger should be sufficient. (Courtesy of [Wikibooks](#))

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