

Basic Pop Guitar Notation

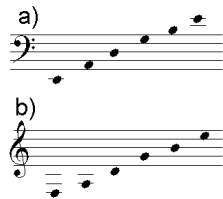
Course materials for module 'Popular Music Analysis' MUSI 221
Institute of Popular Music, University of Liverpool

Basic text and notation supplied by Brad Sheward, 1996
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Tuning

Guitar strings are tuned to the pitches shown in example 1a. Guitar notation, however, uses the treble clef showing pitches one octave higher than they actually sound. Guitarists therefore expect to see the open string pitches of their instruments notated as in example 1b.

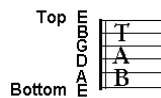
1. Guitar open strings



Tablature

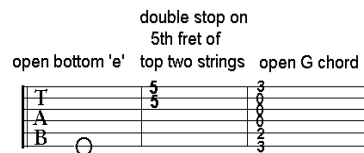
Tablature is a graphic representation of the fretboard of various fretted string instruments (e.g. guitar, bass guitar and mandolin). Guitar tablature is a six-line staff that illustrates the guitar fingerboard. The top line indicates the highest sounding string, top e, and the bottom line the lowest sounding string, low e (see example 2).

2. Open strings in TAB



Numbers are used on each line to represent the fret number on the guitar fretboard. The string and fret position of any note can

3. Fret numbers in TAB



be indicated, even on more unusual guitars (e.g. 7 or 10 string guitars or guitars with 36 frets) and guitars that have been tuned differently. Music for twelve-string guitar is also notated in the standard six-line TAB staff because each of the instrument's six normal strings is doubled by another lighter string tuned an octave higher. In TAB, open strings are represented by the number 0 (zero). Chords are depicted by placing numbers vertically on the staff, as are double stops (see example 3).

There are many different ways of representing the various techniques available on the guitar, in both TAB (short for tablature) and standard notation. Although there is as yet no standard way of notating these techniques, there are some relatively simple notation conventions that denote the action of the various techniques in a reasonably comprehensible manner.

Some of these techniques cannot be performed on certain guitars. For example, whammy bar (or tremolo arm) techniques cannot be performed on fixed bridge guitars (like a Les Paul), whereas the technique which involves bending the string behind the nut is only possible on a fixed bridge guitar (for this technique usually a Telecaster). Most

techniques can be performed on all guitars, although there are some exceptions (For example, string bending cannot effectively be performed on a classical guitar). Also, the way in which some techniques are performed varies on different types of guitar: vibrato on a classical guitar is performed in a gentler and more subtle fashion than it would be on a heavily distorted rock guitar.

Explanation of Techniques

Slurring

4. Pull-off



Slurring is a smooth sounding technique which is made of hammer-ons and pull-offs (and also can incorporate right hand tapping). It can sound quite virtuosic if performed at some speed,

5. Hammer-on



especially when used in conjunction with other techniques such as sweeping and tapping. A guitar with light strings, low action and large frets is easier to slur on, and a smoother, more flowing flurry of notes can be achieved.

Hammer-on. Strike the first note and then fret the second note without picking it (ex.5).

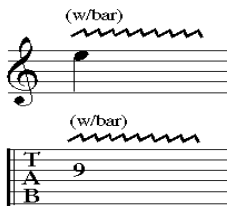
Pull-off. Strike the first note and then pull the finger off to sound the second note (ex.4).

A trill is a slur made up of a rapid succession of hammer-ons and pull-offs between two or more notes. A fast trill can be achieved by tapping the edge of the pick on the string instead of using a second finger of the left hand.

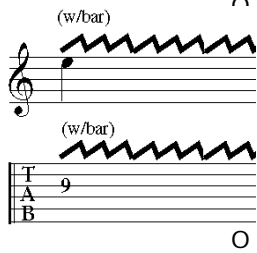
Tremolo Arm (or Whammy Bar)

Many guitarists never play without a whammy bar. Others have never or will never use one because they consider it to be an unnecessary toy. While the whammy bar can be used quite expressively, it is often used to create attention-grabbing effects. Rock guitarists have used the whammy bar to produce a wide range of effects. Most are quite uncommon and may be unfamiliar to the untrained ear. One of the most common uses for the whammy bar is to create a wide-interval vibrato.

6. Vibrato



7. Wide vibrato of



Other effects include the overused 'dive-bomb' technique, bar 'scoops', and bar 'dips'. The whammy bar has also been used to imitate engine revs, various different animal sounds, screams and whistles, and other novel roars and squeals.

Hand *vibrato* or ordinary vibrato with the whammy bar, see example 6.

Wide or exaggerated vibrato by hand or with the whammy bar, see example 7.

→ *Bar scooping*. Depress the whammy bar, strike the note, and rise quickly to the pitch indicated (ex.7).



7. Bar scooping



8. Bar dips

← *Bar dips*. Strike the note and simultaneously depress the whammy bar a semitone. Then raise the bar quickly to the original pitch.

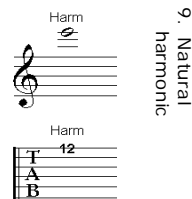
Harmonics

Harmonics on all string instruments are achieved by lightly touching the sting instead of depressing it all the way to the fingerboard. On a guitar these types of harmonics are called *natural harmonics*. The strongest and easiest natural harmonics to play of these are found at the 12th, 7th and 5th frets, but there are harmonic points all over the fretboard.

Table 1: Common guitar harmonics

Guitar string	12th fret	7th fret	5th fret
1st string (top e)	e	b	e
2nd string (b)	b	f#	b
3rd string (g)	g	d	g
4th string (d)	d	a	d
5th string (a)	a	e	a
6th string (bottom e)	e	b	e

The full range of harmonics available on the guitar can only really be heard on a precisely set up electric guitar with a distorted tone. Playing at high volume with the pick-up selector in the treble position (bridge pick-up) also enhances the full range of harmonics.

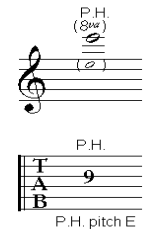


9. Natural harmonic

There are other types of harmonics available on the guitar, most of which are really only used by rock guitarists. Pinch harmonics, tap harmonics, touch harmonics and palm harmonics are the most conventional. In rock guitar playing, pinch harmonics are more common than the others and are used at least as often as natural harmonics. The technique uses the right hand to produce the harmonic, the side of the thumb and the tip of the pick striking the string almost simultaneously. This action of the thumb touching the string slightly after the pick has struck it is very similar to the way in which natural harmonics are produced, but any fretted note can produce a harmonic (as the left hand acts as an extension of the nut) and hand vibrato or a bend can be applied to the note. Again, there are stronger harmonics at certain points between the fretted note and the bridge.

Natural harmonic. Lightly touch the string at the fret position indicated in the tablature (see example 9).

Pinch harmonic. Pick the fretted note (shown in the tablature) and produce the harmonic at the pitch indicated by using the thumb of the right hand and the plectrum (see example 10).



10. Pinch harmonic

Bends and slides

Bend (full) → The note is struck and bent up one whole tone (two frets).



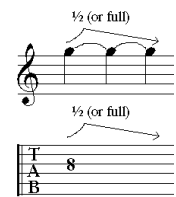
11. Bend 1



12. Bend 2

← *Bend (half)*. The note is struck and bent up one semitone (one fret).

Bend and release → The note is struck and bent up a semitone (or a whole tone) and is then released to the original pitch. The three notes are tied and therefore only the first one is actually struck.



13. Bend & release



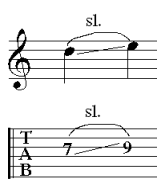
14. Pre-bend and release

← *Pre-bend and release*. Bend the note up a semitone (or a whole tone), strike it and release it to the original pitch.

Unison bend. Two notes are struck simultaneously and the lower note is bent up to the pitch of the other.



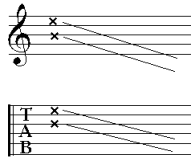
15. Unison bend



16. Slide

← *Slide*. Strike the first note and slide up to, or down to, the second note,

Pick slide → A scratchy sound is produced by scraping the edge of the pick down the length of the string(s). Pitches notated do not correspond to any precise audible pitch.



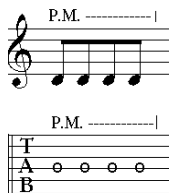
17. Pick slide

Other techniques

Muffled strings → A percussive sound can be produced by lightly laying the left hand across the strings and striking them without producing harmonics. Pitches shown are arbitrary.



18. Muffled strings



19. Palm muting

← *Palm muting*. The right hand can be used to partially mute the string(s) just before or over the bridge.

Rhythm Techniques

There are many different types of rhythm playing on the guitar, the main ones being *fingerpicking*,

strumming, *hybrid picking* and *riff picking* (single notes). The latter is mainly used in rock, metal and blues. It is generally notated in both TAB and standard notation (especially for fast or complicated riffs and rhythm fills). *Hybrid picking*, as its title suggests, is a mixture of fingerpicking and picking with a plectrum (at the same time). It requires right hand finger strength and agility and is typically notated in TAB and standard notation with a note stating 'hybrid picking'.

It is usually up to the player to decide which rhythm(s) to use while *strumming*: chord names and/or chord windows are provided but no rhythm is specified. However, a common way of notating strums is to use rhythm slashes with the chord name above and to place these along with the chord windows at the beginning of the piece. If the window is written at those points in the score where it actually occurs, the notation will become cluttered and may be difficult to read at sight, especially if quick chord changes are involved. Unless the piece contains highly unusual chords there is absolutely no need to use TAB, as this too would make for a very cluttered effect.

A pull-off or hammer-on may often be included as either part of a strum or as an part of an extra pluck after the actual strum stroke. This kind of technique is notated by using string number and fret numbers in the indicated rhythm.

For fingerpicking, both TAB and standard notation are desirable to facilitate reading and in order to guarantee that the right chord is played in the right inversion in the right place on the fretboard. However, since writing TAB can be a an arduous task, especially for non-guitarists, fingerpicking figures may be presented in standard notation alone, along with the chord name.

