

Using Melodic Four Note Permutations

Using four note groupings in music are an easy and common way to organize technical practice, melody writing and improvisation. The problems that can arise through using this method are that you may sound somewhat mechanical and your improvising could sound preconceived. Through use of permutations, rests, rhythmic displacement, acceleration and deceleration techniques (discussed in another article), this technique can become one of your most valuable.

First we'll start with a technique building exercise using the permutations chromatically. Start by assigning a number to each finger used on the left hand. #1 for the index finger, #2 for the middle finger, #3 for the ring finger, and #4 for the pinky. With physiology like this, it's no wonder that 4-note permutations are comfortable and easy to play! We've got a separate finger for each note of our grouping.

Next we have table #1, which is a list of the 24 permutations.

Table #1

1234	2134	3124	4123
1243	2143	3142	4132
1324	2314	3214	4213
1342	2341	3241	4231
1423	2413	3412	4312
1432	2431	3421	4321

Start at the first fret of the sixth string with your index finger, and play one note with the corresponding finger, on each of the first four frets. After playing the fourth fret, move to the fifth string and follow the same pattern, then the fourth, third, second and finally finish up on the first string. At this point, shift your hand up one fret, so that your index finger is now on the second fret and continue with the finger pattern of 1234 through the first then second, third, fourth, fifth and sixth strings. (example #1)

Example #1

Fingering: 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
 String: 6 5 4 3 2 1 1 2 3 4 5 6

Depending on how much time and endurance you have for this exercise, you could continue shifting up as before until your first finger is on the twelfth fret and then work your way back to the first fret using the same pattern. Every other pattern works the same way with an adjustment to the left hand fingering.

Example #2 shows how a 3214 pattern would work through the first six strings. Always try to alternate pick through these patterns (down-up-down-up) to achieve a smooth sound and to enable your speed to gradually increase.

Example #2

□ V □ V □ V □ V etc....

fin. 3 2 1 4 3 2 1 4 3 2 1 4 3 2 1 4 3 2 1 4 3 2 1 4 3 2 1 4 etc.
 str. 6 5 4 3 2 1 1 2 3 4 3 2 1 2 3 4 3 2 1 4 etc.

Our next application of these permutations is to apply them to scales, in this instance, a C major scale (example #3).

Example #3

fin. 2 4 1 2 4 1 3 4 3 1 4 2 1 4 2
 str. 5 4 4 3 4 4 4 5 4 5 4 5 4 5

Examples #4, #5 and #6 show permutations 1234, 1243, and 2134 applied to a one octave C major scale. Notice that the permutations don't change direction when the scale shifts from ascending to descending. Every permutation should be played ascending and descending through the scale to help come up with new sounds that might not be immediately evident or easy to play. Make sure to play these in every key, as well as every different major scale fingering that you know, and then try out different scales, such as melodic minor, harmonic minor and the numerous pentatonic scales.

Example #4

-use fingering from example #3

Example #5



-use fingering from example #3

Example #6



-use fingering from example #3

Our last application (for now) is to apply these permutations to arpeggios. For triads we'll play 1 3 5 8 and for seventh chords 1 3 5 7, so that our permutations will fit into each arpeggio easily. Example #7 shows the first six permutations on a C major arpeggio, and example #8 shows the next six on a C major 7th chord. Practice these through all twelve keys, as well as every different triad and 7th chord arpeggio that you know.

Example #7



fin. 2 1 4 4 2 1 4 4 etc.
str. 5 4 4 3 5 4 3 4 etc.

Example #8



fin. 1 2 4 3 1 2 3 4 etc.
str. 4 5 4 3 4 5 3 4 etc.

As a final example, I've written out a solo over the A section of a Bb rhythm changes using permutations, first without any rhythmic variety, and then second with rhythmic variety. Write out what each permutation is above the staff, to get an idea about how they can fit together.

B \flat Δ 7 G7 Cmin7 F7 Dmin7 G7 Cmin7 F7

Permutations _____

Fmin7 B \flat 7 E \flat 7 E \circ 7 B \flat Δ 7 G7 Cmin7 F7

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