A Hand-Clappin', Foot-Stompin' Funky Good Time

Four-Limb Independence for Handbell Musicians

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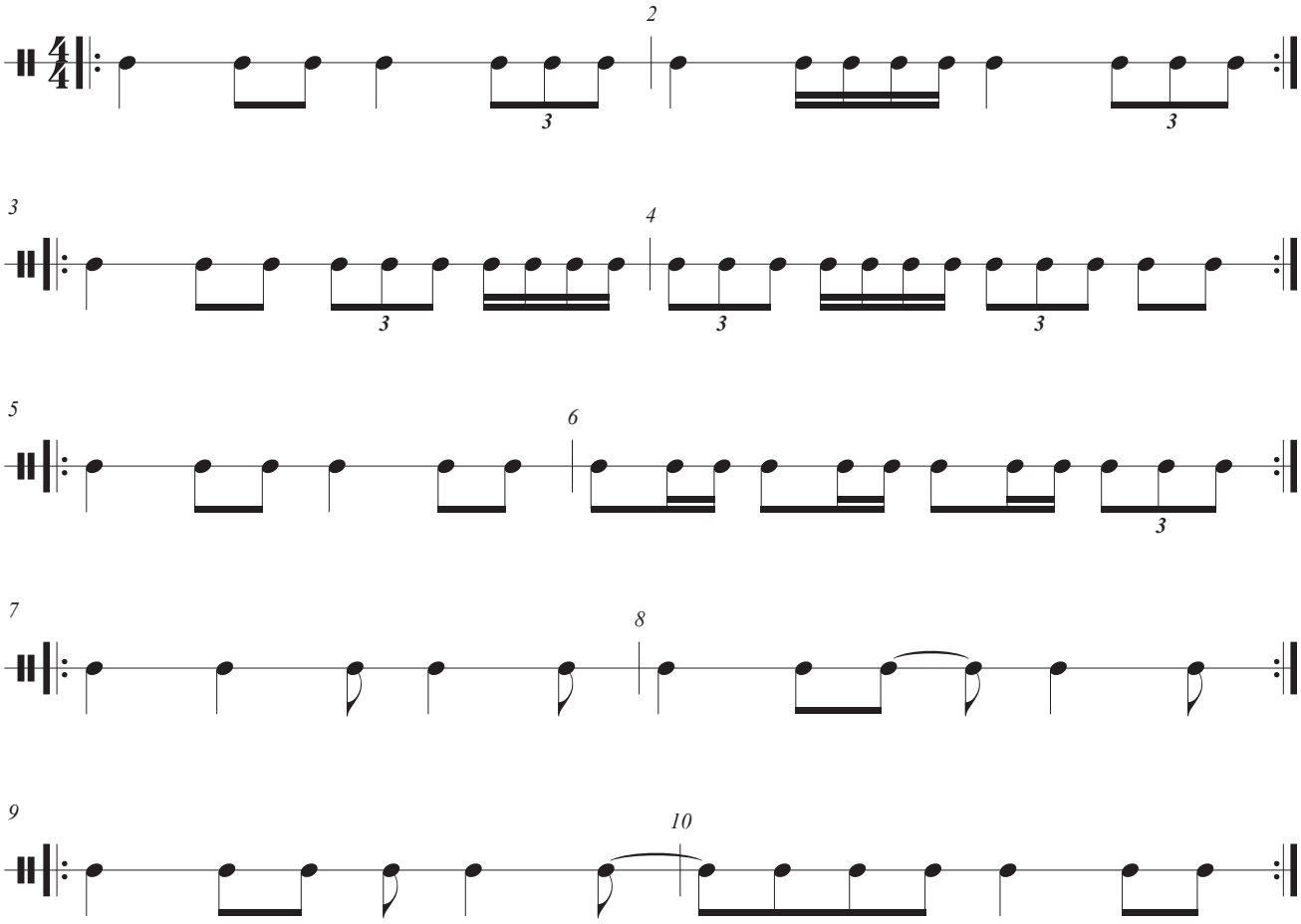
Introduction

Study after study shows that the brain is not “fixed” or “frozen in time”, but changes throughout our lifetime by being exposed to different stimuli. This malleability of the brain is known as “Neuroplasticity”, which is defined as the ability of the nervous system to respond to intrinsic or extrinsic stimuli by reorganizing its structure, function, and connections. Recent studies show that musical rhythm training involving all four limbs increases functional connectivity across the entire brain.

Single Limb Studies

Let’s start with just one limb at a time with some simple rhythms. Do each line with each limb a minimum of two times.



Two-Limb Studies

Now let's move on to using two limbs. There are six possible pairs of limbs: RF-RH, LF-LH, RF-LH, LF-RH, RF-LF, RH-LH.

- Do the single-limb examples again, but alternating between the six combinations listed
- Do them again, but start on the opposite hand or foot (ie. instead of going RF-RH, go RH-RF)
- Do them again, but do them with the limbs paired (ie. RF+RH alternating with LF+LH, then RF+LF alternating with RH+LH)

Three-Limb Studies

There are four possible three-limb combinations: RF-RH-LH, LF-LH-RH, RF-LH-LF, RF-RH-LF. Further variations are possible by reversing the sequence of the combinations, and even more are possible by starting the sequence on a different limb.

- Do the single-limb examples again, going sequentially between three limbs
- Do them again, but in the reverse direction
- Do them again, but reverse direction between repeats (ie. first time through, go RF-RH-LH and the 2nd time through go RF-LH-RH)
- Do them again, but start on a different limb (There are three possible starting points for each combination)
- Do them again, starting on a different limb AND reversing direction between repeats
- *Added challenge:* Do them again, but this time do the limbs in pairs as you go around the triangle. (ie. RF+RH—RH+LH—LH+RF)
- *Added challenge II:* Do that again, but reverse direction between repeats

Four-Limb Studies

Using four limbs opens up whole new worlds of possibilities. There are 24 possible sequences—six per starting limb—and that's not even counting throwing in pairs or triples!

Those 24 sequences are:

1. RF — RH — LH — LF
2. RF — RH — LF — LH
3. RF — LH — RH — LF
4. RF — LH — LF — RH
5. RF — LF — LH — RH
6. RF — LF — RH — LH

7. LF — LH — RH — RF
8. LF — LH — RF — RH
9. LF — RH — LH — RF
10. LF — RH — RF — LH
11. LF — RF — LH — RH
12. LF — RF — RH — LH

13. RH — RF — LH — LF
14. RH — RF — LF — LH
15. RH — LF — RF — LH
16. RH — LF — LH — RH
17. RH — LH — LF — RF
18. RH — LH — RF — LF

19. LH — RF — RH — LF
20. LH — RF — LF — RH
21. LH — LF — RF — RH
22. LH — LF — RH — RF
23. LH — RH — LF — RF
24. LH — RH — RF — LF

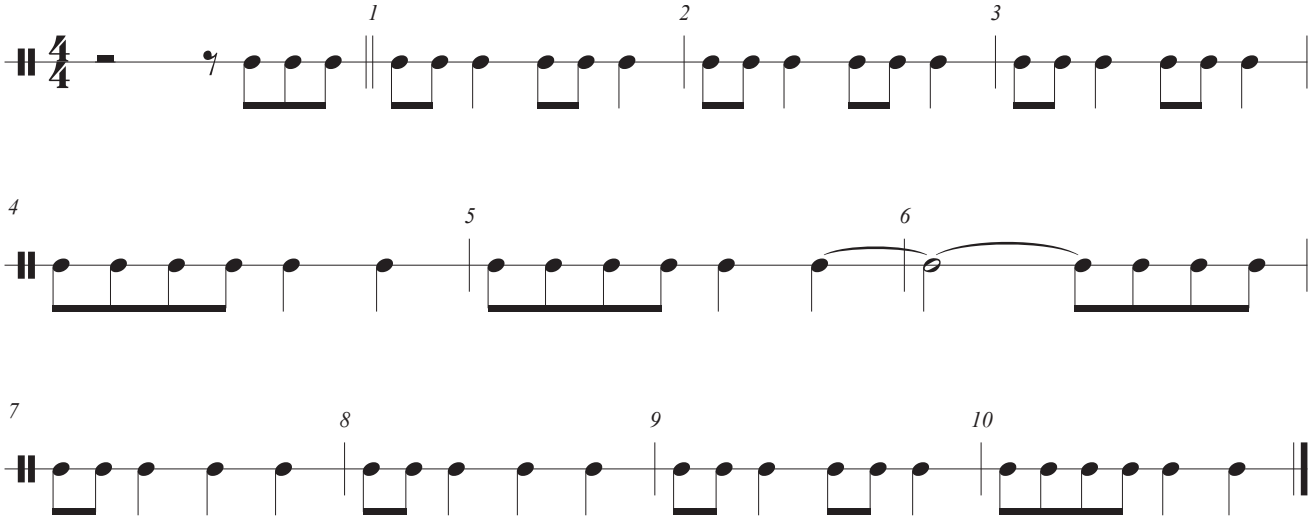
As before, let's start with our single-limb rhythms, but doing them with the four-limb sequences. Start easy and repeat the same sequence through the entire list of exercises before moving to combinations of sequences, or—if you're feeling brave—jump right in and mix up the sequences in any order you wish!

Once we've gotten a handle on using all four limbs, we're going to start doing the sequences using real music rather than generic rhythmic exercises. We'll start with easier rhythms and move to more complex ones.

On This Day Earth Shall Ring, arr. by Cathy Moklebust

Choristers Guild, L3. Full Score = CGB460, HB Part = CGB461.

There is a 12 bar intro before the melody enters.



There is a 6 bar inteval before the melody repeats.

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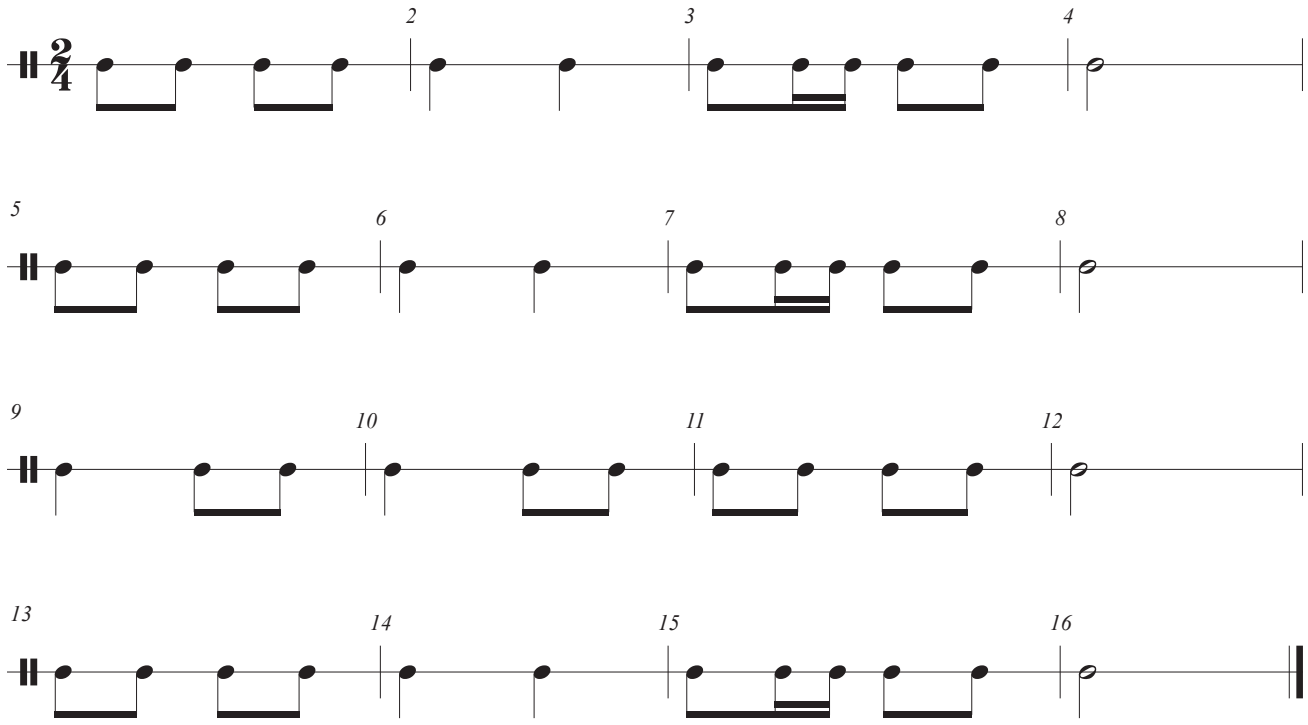
Now the Green Blade Riseth, arr. by Kevin McChesney

Agape Hope Publishing, L3. Code No. 1892.

There is a 12 bar intro before the melody enters.



There is a 3 bar interval before the melody repeats.

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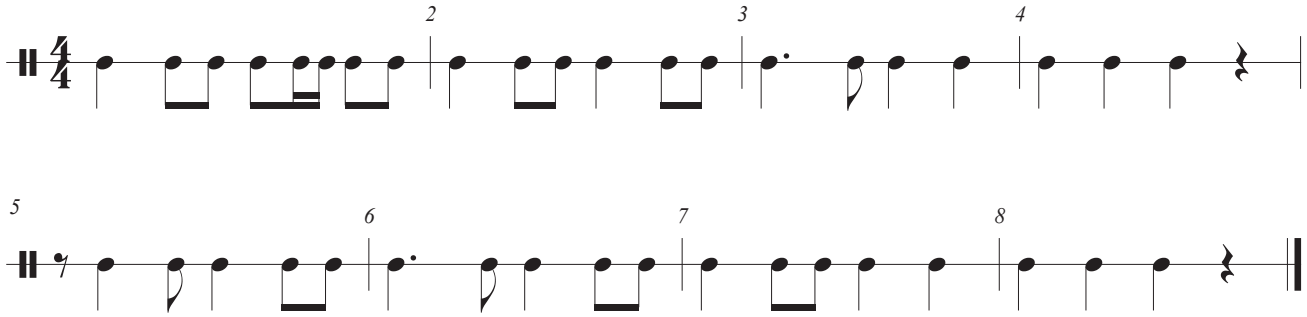
Korobeiniki, arr. by Matthew Prins

From the Top, L3. Catalog #20163

There is NO intro before the melody enters.



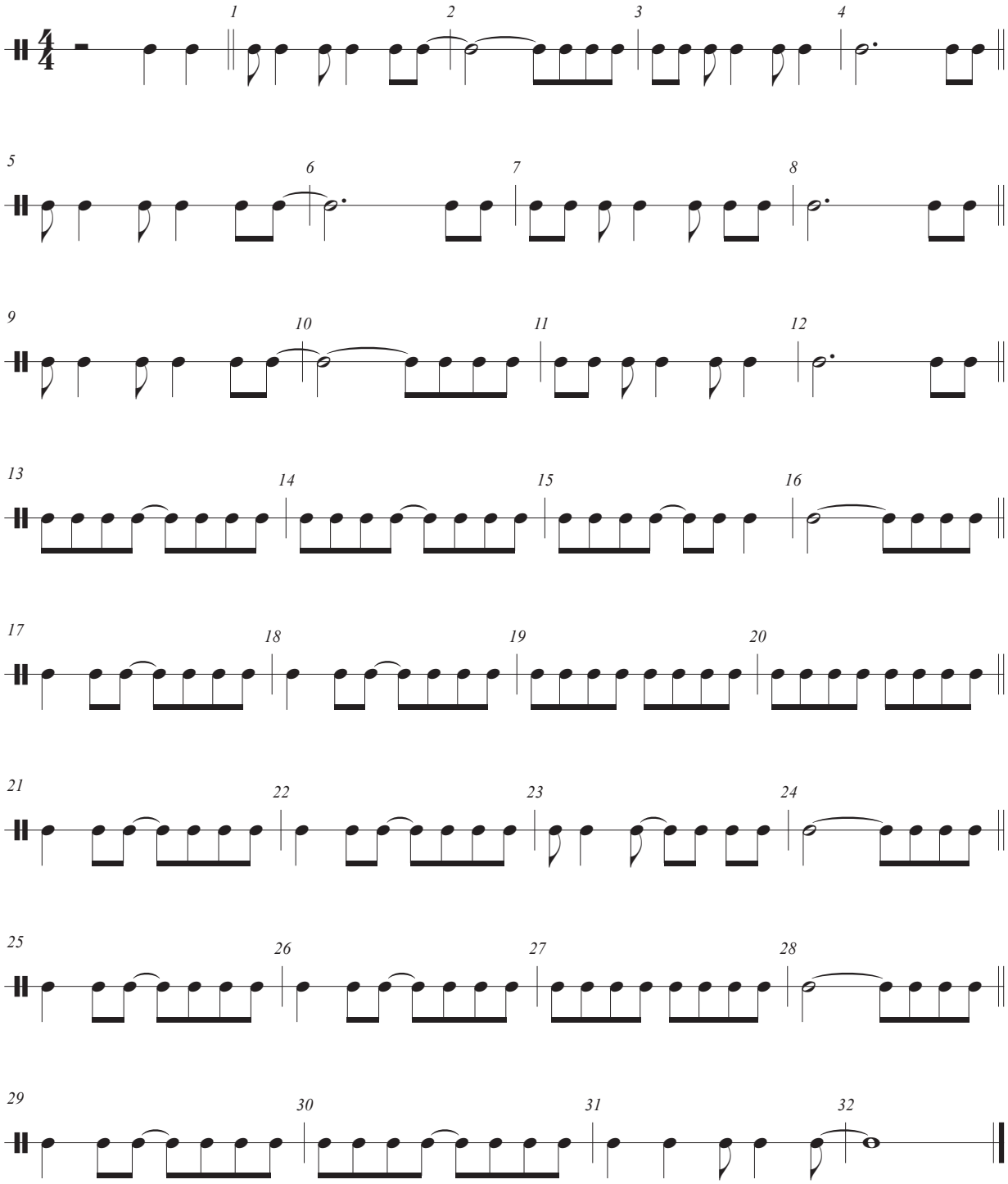
The melody plays twice, then there is an 8 bar interval,
then the melody plays one time, then there is another 8 bar interval,
then the melody plays twice again.
NOTE: The melody accelerates each time it plays!

Up to this point, our examples have repeated the melody with an interval between repeats to give us time to "reset" and get ready. Our next example is 32 measures long with no time to rest. Practice it until you can play through without stopping!

The Entertainer, arr. by Jane Kristenson

From the Top, Quartet EM. Catalog #1060

There is NO intro before the melody enters.



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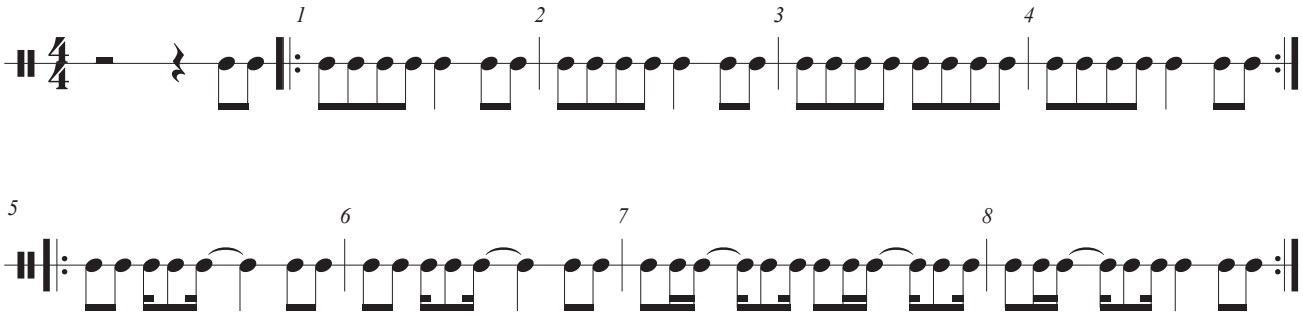
This next example starts with a "straight" rhythm, then changes to syncopated.

Popcorn, arr. by Amy Maakestad

From the Top, Level 3. HB Part = Catalog #20569, HC & BW Part = Catalog # 20569-C

There is a 6 bar intro before the melody enters.
Repeat this rhythm 4 times before moving on to the syncopated version.

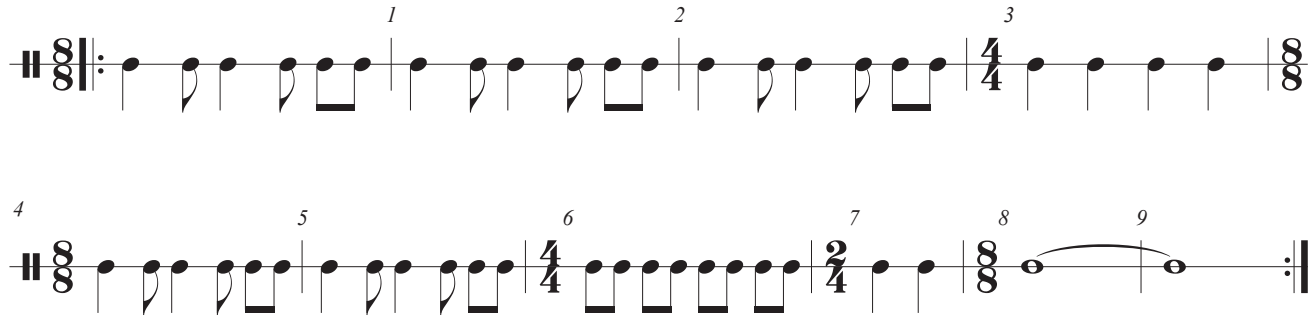


Now let's introduce changing time signatures.

Dorian Dance, by Michael Joy

Jeffers Publishing, L4+. JHS9365.

There is a 9 bar intro before the melody enters.
The melody repeats immediately.



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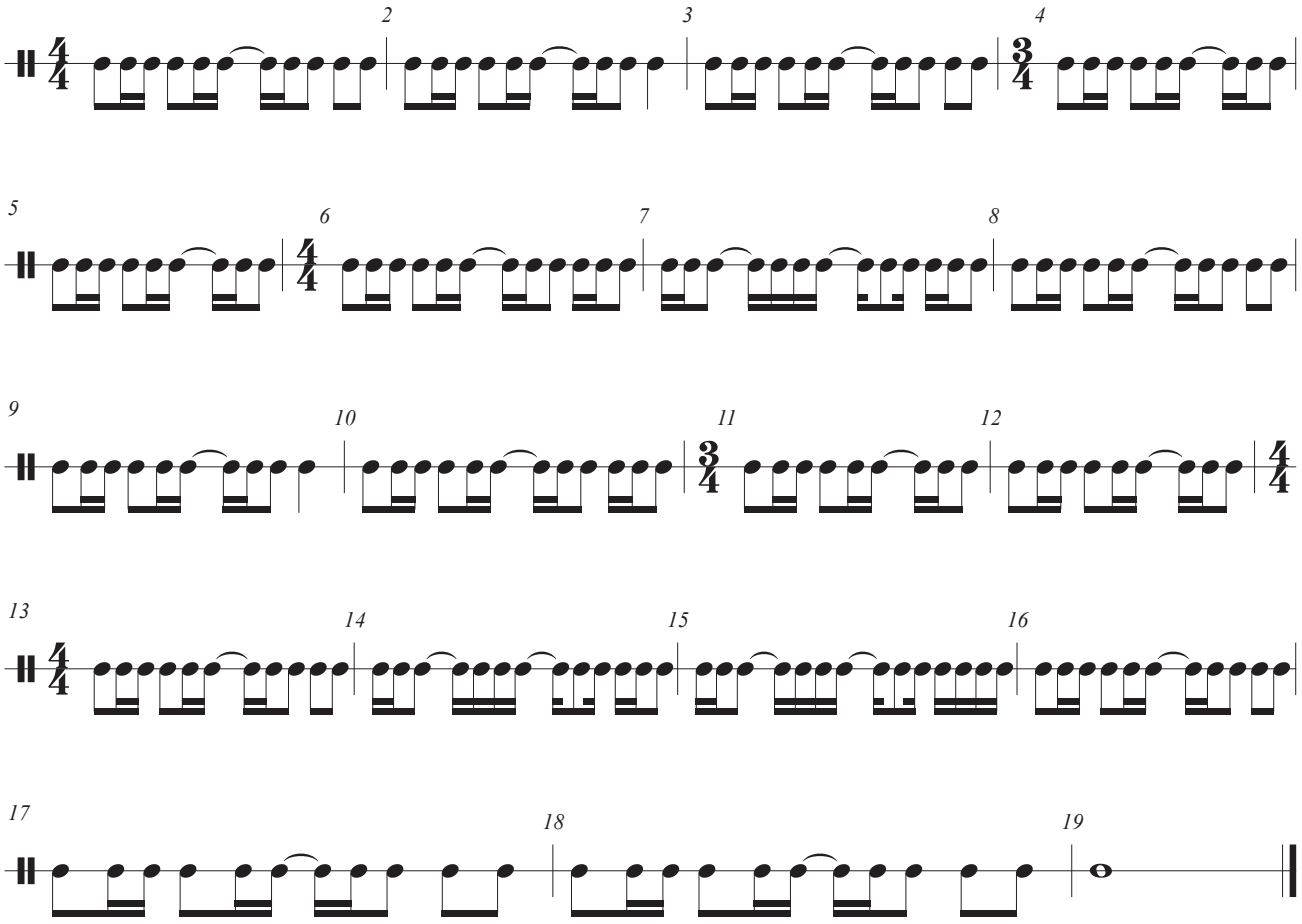
Finally, our most complicated rhythm yet!

Gaudeamus, by Arnold Sherman
Jeffers Publishing, L4+. JHS9365.

There is NO intro before the melody enters.



Conclusion

Mastering four-limb independence is good not only for rhythm skills, but also for brain interconnectivity. We have so many hidden opportunities to practice these skills in our daily lives: in our cars while listening to the radio (if you drive an automatic transmission, you have three limbs available!), while standing in line at the grocery store, etc. Try to incorporate rhythm drills into your daily life, even if for only a few minutes at a time. Be creative! Your brain will thank you.

RESOURCES:

Amad, Ali, et al. "Motor Learning Induces Plasticity in the Resting Brain-Drumming Up a Connection." *OUP Academic*, Oxford University Press, 3 Mar. 2016, http://doi.org/10.1093/cercor/bhw048.

Marsh, George. *Inner Drumming: Drumset Exercises for Developing Body/Mind Awareness*. Sher Music, 2016.