PRACTICING THE SAXOPHONE WITH LOOP PEDAL TO IMPROVE VOICE LEADING

By

MR. Pisut PRATHEEPASENA

A Thesis Submitted in Partial Fulfillment of the Requirements

for Master of Music (Music Research and Development)

Graduate School, Silpakorn University

Academic Year 2018

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The purpose of this thesis is to show why voice leading is a central part of practice for jazz saxophonists and what support can be offered by the loop pedal.

Practicing voice leading helps saxophonists and other jazz musicians to develop their improvisation skills, as it assists in increasing awareness of guide tone options in one chord and how those connect to the guide tones in the following chord. The guide tones function like stations that help to set out the route of one's improvisation. That is why chord progression is important for voice leading.

The loop pedal is a versatile guitar effect that can be used to record and play loops, which, among other things, can be used as a background for saxophone practice. For a long time pianos were the only tool to practice voice leading with, but now the loop pedal has become a practical addition.

Turnarounds are repeat progressions and, since the function of the loop pedal is based on repetition, they work well together by providing the ability to hear how different sounds connect to each other.

Indeed, only practicing voice leading with the loop pedal and the saxophone does not make for good improvisation, but it can empower jazz saxophonists to be more creative with the way they improve their skills and maintain both personal and interesting elements in their practice.

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Introduction

There are two main components to this thesis: voice leading and loop pedals. Voice leading describes the relationships between guide tones while the loop pedal is a guitar effect that allows the user to record and play a section back in a loop. Both of these components can be combined seeing as the loop pedal can be used to create a backdrop for voice leading practice.

For saxophones and many other non-keyboard instruments, voice leading practice tends to be difficult due to the fact that musician need to hear several notes at the same time and these instruments can only play one tone at a time. This is why the loop pedal, which can manipulate the element of time, carries significant utility for the practice of these instruments.

This thesis seeks to demonstrate effective methods to use the loop pedal in combination with the saxophone in order to develop different personalized exercises. It goes beyond providing a theoretical perspective on how the loop pedal can be useful for voice leading practice to provide different concrete exercises that make use of this method. These exercises can also be adjusted when practicing a particular tune.

In order to fully understand the benefits offered by the loop pedal in voice leading practice, it is important to take a closer look at its history and at the general history of loops in music as well as at the way the loop pedal compares to other tools that are commonly used in the practice routine of saxophones. As mentioned before, this research focuses on jazz saxophones, but it is useful for any jazz musician who is interested in a new way to practice voice leading. Thus, the role of voice leading within jazz saxophone practice will also be explored with regard to how it helps to hear lines for improvisation. Lastly, it is also essential to consider how a more active approach in

the development of a personal practice routine can have a positive impact on one's abilities and confidence.

There are five terms that are essential to this thesis and therefore deserve to be explained at this point. The first of these terms is improvisation, which relates to how one feels during the moment of playing an instrument and reacting spontaneously to the sound of the surrounding environment. "Too often we act as though someone else controls our mind, not us. jazz, improvisation, insists that YOU use your mind and consequently reap the rewards of creativity."[1]

The second term is ear training and, in this thesis, means practicing to develop the skill of recognizing sounds, intervals and rhythms in music. The third important term is guide tones, which are components of chord progressions that mark the change in harmony that takes place. These tones can move to one another in half steps, whole steps or one and half steps, but the ideal should always be to create a movement that is as smooth as possible. The guide tones can be the root: 3rd, 5th, 7th, 9th, 11th and 13th. The forth term is guide tone resolution and this concept refers to the way guide tones relate to one another in a chord progression (I – VI – ii – V). The last term, loop, refers to a section in a piece of music that is being repeated. Loops can be both short or complex.

The argument of this thesis is structured as follows: Chapter 2 starts with a theoretical look at the big picture concerning the way improvisation relates to jazz in section 2.1. Within this section, how practice can have a positive impact on one's ability to improvise and some of the other aspects that need to be considered when planning a practice routine will be discussed in the subsection 2.1.1. Furthermore the three main tools that are currently being used to support practice and how to choose the right tool to suit personal preferences will be discussed in subsection 2.1.2. Section 2.2 is an explanation of what voice leading stands for and how it relates to guide tones. Following that, section 2.3 considers the traditional method to practice voice leading

[1] Jamey Aebersold, "The Jamey Aebersold Jazz Play-a-Longs," http://jazzbooks.com/jazz/ABPL.

with the piano in a turnaround progression; as well as how the guide tones move to one another when being used in a substitution chord. We will take a look at how the piano compares to practice with the loop pedal in section 2.4. In section 2.5 we discuss a simple loop setup and take a quick look into the history of the loop pedal to help the reader choose according to their personal needs and preferences. The next section, 2.6, uses the circle of 5th as an example for why the proposed exercises work well to improve voice leading. In the last section of chapter two, we will take a look back at how all of the pieces fit together as well as the background for how this research was inspired. In chapter 3 we will move on to the combination of chord progression with guide tone resolution as well as an introduction on how to use the exercises in the following chapter. All of the exercises in chapter 4 use turnaround progressions and are based on the basic principle of repetition. They were developed to practice voice leading with the loop pedal as well as to be adapted to practice voice leading for any song. In chapter 5 the thesis ends with a summary of the research results and gives an outlook on possible questions to be examined in future research.

2

Literature review

The literature review for this research is divided into seven sections. The first of these regards aspects of jazz practice and includes skillset development and modern tools for practice: iReal B, play alongs and the loop pedal. Secondly, an introduction into voice leading is presented and then traditional methods to practice voice leading with the piano are presented. In the fourth section, a comparison between voice leading with the piano and the loop pedal is made. Subsequently, there is a discussion of voice leading methods with the loop pedal and then, in section six, an example using the circle of fifth is put forward. Finally there is a reflection on the history of how the exercises were developed.

2.1 Aspects of Jazz Practice

Before delving into how to practice voice leading using the loop pedal, it is important to recognise why voice leading practice is so important in the first place. That is why we will take a look at the role of improvisation in jazz and its relationship with voice leading practice. Jazz places a strong focus on improvisation. A theatre performance in which actors have previous knowledge of the events that will transpire is a poor analogy to jazz music. It is arguable that jazz functions more like a spontaneous, and unpredictable, conversation. There are notions of rules in place to keep this “conversation” on track, but still there is room to improvise and make choices in the heat of the moment. The quality of the music is highly dependent on the individual skills of the musicians and their communication with one another, which come together to create something new.

This is only possible because of the culture at large that is understood and respected by all of the band members. Musicians' shared understanding of melody, harmony and rhythm is at the foundation of the conversation. There is, however, still the element of personal taste that plays into the choices each member makes as they improvise. The non-constraining characteristics of jazz make what musicians one likes a much more personal preference since different approaches to playing can be interpreted similarly to different personalities in a conversation. Some participants are talkative while others remain quiet. In the same manner some musicians take on a leading role whereas others prefer to be supportive and remain in the background.

> "Jazz is a form that creates a space for improvisation to happen. It is about giving space to others and supporting them. Everyone has their role in holding the space, but the roles get moved around from person to person, instrument to instrument, on an as-needed basis. Jazz provides the overall musical structure that allows people to listen and play with each other and build new things all the time."[2]

This concept of a flowing conversation is, of course, a best case scenario. Sometimes the "conversation" develops to display unhealthy selfish qualities that do not promote respect for some band members and can lead to musicians playing over each other unproductively. Of course, there is more space in music for musicians to play simultaneously than participants in a regular conversation, but a performance only works if each player takes into consideration what all of the others are doing and reacts accordingly.

Since good improvisation depends on the ability to both communicate, as well as create interesting solos, the most suitable approaches to developing this skill may not be readily apparent. Knowing the importance of improvisation in jazz, it is clear

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[2] Steven Dillard, "Why-Is-Improvisation-Important-with-Jazz-Music " https://www.quor-a.com.

that improving one's ability to improvise is crucial. The conversation-like nature of jazz also demands for practice to be both, universal and personal to the individual saxophonist. It needs to be "universal" in the sense that the basic skills of playing the instrument need to be acquired and fine-tuned by all musicians; however each saxophonist must also develop a personal musical style or voice. An analogous example would be how language is necessary for communication, but individuals use the same language idiosyncratically leading to minor variations.

Not every saxophonist's practice routine should look the same. Of course a beginner's routine will look different to that of a professional jazz saxophonist. If one is not yet able to play the instrument, there is not much of a point to trying to develop improvisation. Initially simply blowing a clear note is a struggle as everything is new and unknown. However, just as young children grow and mature to understand interactions with their surroundings, a jazz saxophonist develops similarly with the horn. Thus it is key to stay flexible in one's routine and to continuously improve and alter its priorities.

In the following section the fundamental skills that should be acquired during saxophone practice will be discussed. It is important to keep these in mind, since practicing voice leading should not stand alone as the only element for practice.

2.1.1 Skillset Development during Practice

Before discussing the components of saxophone practice that are used to enhance improvisation, we will first take a look at other fundamental skills that are also being acquired during practice. There is a universal aspect to jazz saxophone that can only be developed over time. It is necessary to steadily work and progress over a period of years, independent of personal style and preferences. Within this practice falls the development of tone: having a good breathing technique, embouchure, moving smoothly between intervals, developing a range and dynamics, as well as techniques by practicing scales, arpeggios, patterns and varying the timing and tempo. The development of a personal sense of language through jamming lines, practicing

common chord progressions, and articulation is essential. Tunes can be practiced by learning and internalising their melodies, lyrics, forms and structures. Transcribing tunes, and thus learning from one's inspiring figures, singing and playing along with recordings, and also learning about sound and the expression of emotion within music can also be helpful.

This overview shows how complex the development of an appropriate practice routine is and how a variety of different aspects needs to be considered, and possibly shifted over time. These skills can be summarized as tone, general technique, language, and knowledge of tunes. It is also important not to expect immediate results when changing up a practice routine since training one's ears requires an extensive period of time.

2.1.2 Modern Tools for Practice: iReal B, Play Alongs and the Loop Pedal

There are three common technologies that are used by musicians to assist their practice routines: the loop pedal, iReal B, (or similar programs) and play alongs. Each of these tools has particular strengths and weaknesses and is useful for different stages and aspects of practice. The loop pedal is the most adaptable of the three followed by iReal B, and finally the play along. However, the setup that a musician choses to utilize remains a question of personal taste. The goals that people have during practice differ and these goals influence equipment choices. For those who are playing music as a hobby, iReal B and play alongs may be more enjoyable and emulate the experience of soloing with the backdrop of a band without the pressure of actually performing.

When comparing the three technological options it becomes clear that there is no single approach that will work for everyone. When considering each device it is important to be aware of personal preferences while keeping in mind what effect each option may have on one's reactions during improvisation in a real band setup.

Each of these tools was invented with a different concept in mind. The basic principle of the loop pedal returns to the importance of repetition in music history. This method enables one to easily improvise over a loop, from a simple rhythm or bass line to a more complex setup while always following the same principle. Technology elevates repetition to a higher level and thus aids musicians in their practice and development. A loop pedal is an effect used mostly by guitarists, but can also be very useful for other instruments when used appropriately.

Programs like iReal B function based on the idea that it would be most useful for musicians to have the illusion of a background band when practicing and developing their solos. The program allows users to feed in any chord progression and choose the instruments and styles of the background band to enable the player to have an experience creating solos alongside this virtual setup.

Play alongs have a similar concept at their core. Musicians should be able to practice with a band regardless of location and the best way to learn how to play is by actually playing. With high quality recordings of legendary Jazz musicians available, the doors to high quality improvisation are open. These CD's are also set up to be useful for different instruments, depending on the setting. They also come alongside booklets that contain transposed parts for all instruments including Treble Clef, Bass Clef, Bb, and Eb" [3]

The table below also provides a brief overview on how these three tools compare. The tool of choice differs depending on personal priorities as well as the stage of the individual's current skillset.

[3] Aebersold.

Example 2.1: Contrasting the advantages and disadvantages of Loop Pedal, iReal Band the Play Along

Tool	Loop Pedal	IReal B	Play Along
Pro	blanc canvas repetition provides freedom can practice a particular section of a song takes initiative/active approach can absorb almost anything/all information timing is essential can upload outside recording for usage portable	create your own backing tracks collect one's chord charts create personal charts can practice a selected section of a song possible to loop can do what the play along does and more but with a digital sound instruments and styles to choose from good to practice one song in different keys	background for improvisation can be a CD/Cassette or LP simulation of having a band in your house useful for different instruments straight forward to use with guidance in booklet semi portable

		for musicians at all levels **highly portable**	
Con	mostly for advanced musicians may be a little uncomfortable in the beginning/ requires knowledge of technology as well as timing requires a plan of what one wants to use it for	lacks human interaction keeps one from fully developing one's ear creates a dependency illusion of being better than one actually is confusion stemming from multiple chord progressions is possible	not very creative/open limited in songs behind the times rigid structure/tempo less variation than a real live player illusion of being better than one actually is

Table 1 Contrasting the advantages and disadvantages of Loop Pedal, iReal Band the Play Along

To see where and how these concepts arose, will now go a little deeper into each of their developments. Out of all three of these, the loop pedal works the most like a blank canvas. The modern loop pedal was invented in the 1980s and has since been further specialised, refined and become more user friendly. It is based on the commonly accepted understanding of the power of repetition in music.

> "Vibration and regular repeating patterns are the foundation of matter and energy. On a scale more accessible to humans, rhythmic repetition, oscillation, and pulsation are dominant qualities of nature known to everyone: Waves on a shore, moon phases, day and night, the seasons."[4]

Repetition has been a central element in music both globally and historically. However, during the Middle Ages, European music developed in a different direction. As such, the hype after the return of repetition as a central component in European music was considerable. This is one of the many reasons why repetition is not only central to the way music is performed, but also to the way we learn to play it.

When a particular section of a tune is troublesome, a simple exercise can be set up with minimal effort using the loop pedal. In contrast to the functionality of iReal B and play alongs, coming up with strategies to use the loop pedal for practice and composition takes initiative. There is no pre-made structure to build upon. When doing so, focus on one's timing is crucial. If the beat is off, the consequences are obvious. But this also means that one will improve quickly at recording different sections on beat meaning that one's ear is being trained.

The modern loop pedal is also flexible in that it can play an extensive selection of sounds. This is possible as long as these sounds are in the form of an audio file or recorded onto the loop with the help of a microphone. Therefore the loop pedal can

[4] Michael Peters, "The Birth of Loop," http://www.loopers-delight.com/history/Loophist.html.

function as a whole band and backdrop. Nevertheless, the loop pedal is different from a live band in that it bears similarities to creating one's own identical copies rather than being in a band with oneself. In contrast to the piano and other heavy instruments, the loop pedal is also easily portable, especially if one works with a simple setup.

IReal B (now iReal Pro) is an app/program that functions as a musical backdrop. It offers a large collection of chord progressions to the tunes one is working on from the in app forum. This app was first developed in 2008. There is also the option to create one's own charts whenever needed. IReal B is useful for practicing a specific section of a song while playing it in a loop and following the same basic principles as the loop pedal. The issue with this approach is that it requires less from one's own initiative. One might wonder how a program is capable of coming up with a background "band" for any chord selection. The reason this is possible is the selection of digital instruments that also come in differing styles. In addition, the program has a setting to play the same tune in different keys with the purpose of helping musicians become more flexible when playing that tune. IReal B can be used by musicians of all levels and it also exists in a highly portable format as an app.

Similarly, the Play Along is also a simulation of a backing band and is in some regards the oldest of the three tools. It was invented in 1967 and has managed to adapt itself to different media. At first it was a book with an LP, and later with a cassette and even later with a CD. Its basic setup never varies significantly.

> "The fact is, the best way to learn music is to PLAY music, and what better way to play than with some of the absolute greatest rhythm sections in the world of jazz? It no longer matters whether you are in an "island" of jazz in your community, you can play with the best right away."[5]

[5] , http://jazzbooks.com/jazz/ABPL.

At the time of its invention, the play along must have felt quite revolutionary in its ability to create a simulation of what it would be like to play alongside one's heroes. Now, there are countless versions of the play along from different musicians and in different languages that cater to all kinds of tastes and nationalities. The play along can be used for different instruments and is pretty straightforward in its usage. Among its most desirable characteristics are the authentic recordings of a professional band as backdrop as opposed to computer generated sound. However, this feature also limits what tunes can be practiced with play alongs.

In terms of flexibility, the play along is the least useful of all three tools. If one is used to practicing with a program like iReal B, it may feel outdated to merely have a small selection of tunes to choose from. In a play along, it is also not possible to adjust the tempo or focus practice on particular sections of a tune. Another problem relates to practicing over and over alongside a single fixed recording in contrast to a real life band where there is less predictability and playing the same tune repeatedly will never produce the exact same outcome. In a real setting, a lot more attention and communication is needed to find success. Thus the play along can create a false sense of security that falls apart when one returns to playing with a real band.

But iReal B has similar problems to the play along. There is also an illusion of safety based on the knowledge that a complete simulation of playing with other's works and sounds cannot be fully created. It also is less effective than the loop pedal when it comes to training one's ear since iReal B only provokes thought in terms of one's own role in the band, instead of compelling one to create each section singlehandedly. Since chord charts are shared in the in-app forum, there will often be different versions of chords for the same tune, which ought to be kept in consideration before playing with others. The danger exists that members might become confused by differing versions.

The loop pedal is surely the most flexible of the three tools, but that also means that there is some technical and musical knowledge needed to attain the greatest potential benefit. Consequently, it the best choice for advanced musicians

rather than beginners, and if one is used to practicing with play alongs or a program like iReal B, it may be challenging at first. However, the adjustment is worthwhile in the long run and will boost musicians' confidence and abilities.. Additionally, it is necessary to have a clear idea of the appropriate exercise that should be used to create a loop pedal. That being said, there is no need to feel intimidated by this hurdle since the most important details one needs to know in order to practice voice leading using the loop pedal will follow later on in chapter

This comparison shows that the loop pedal is the most flexible piece of equipment for saxophone practice and is not only useful for the universal aspects of saxophone practice, but also for practicing voice leading and thus becoming more capable of creating interesting solos. In regards to planning a jazz saxophonists practice methods there are, as we have seen, different aspects to consider: the development of further knowledge of an instrument, improving interaction with the rest of the band, ear training and more.

We have now seen how the different aspects in jazz saxophone practice flow together and how different stages in one's development as a saxophonist require different priorities. We have also compared the three main tools that are being used in jazz saxophone practice today. The loop pedal is the most versatile piece of equipment, but it may not be the most useful to someone who is at the early stages of learning how to play their instrument. Reactions when playing in a real band setup are also always a little different from those expressed by a machine or device. Technology has not reached a point where computers react similarly to humans, which makes this fundamental difference an element to be aware of when creating a practice routine. However over the last few years, technology has advanced at an impressive speed and it is likely to continue doing so over the next few years. In a short time, the borders between loop pedals and computers may have blurred even further.

The universal aspects of jazz saxophone practice build the foundation for musicians to be able to play together. These skills are necessary to build communication and thus they are the basis for improvisation to flourish upon. That is

why they sit at the core of Jazz saxophone practice. From there on, one can move outward to the more personalized components of practice, which are crucial for improvisation. An awareness and understanding of the role of improvisation in jazz is essential in order understand how voice leading fits into the practice routine of jazz saxophonists and contributes to the ability to create with high-quality solos.

In the next chapter follows an introduction into voice leading and an explanation of why practicing it is so useful to train the ear and improve the ability to come up with interesting solos.

2.2 Introduction to Voice Leading

After having seen some of the different aspects in jazz saxophone practice, we will now move on to the topic of voice leading to explain what it is and why it is useful. Practicing voice leading is not only useful for saxophones, but also for a wide range of other instruments. As already discussed, voice leading is central to the practice of jazz saxophonists. It helps to improve one's ear and to prepare for improvisation. Learning how "voices" move through the chords is vital for developing one's own lines of improvisation.

> "Voice leading refers to the way that certain notes or "voices" within chords move and change ("lead") in a chord progression. Many chords in common harmonic progressions have both common tones (pitches that are shared by two different chords) as well as differing pitches. The interplay of common tones and notes that change from chord to chord creates the perceived sense of harmonic flow, momentum, and/or forward motion in the music." [6]

[6] Josiah Boornazian, "How to Use Voice Leading in Your Jazz Solos," https://www.learn-jazzstandards.com/blog/learning-jazz/jazz-theory/how-to-use-voice-leading-in-your-solos/?fbclid=IwAR04fYszDOWt31Kv4p5RIpV1bCQ9KCR351qh7W86CH2DvSM1Hmvhpo-2qzk.

This forward motion can, if well executed, have a deep psychological impact. It determines the mood of the piece as well as the listeners' reactions. Having a deep understanding of the principles that underlie voice leading can transform the style of improvisation and how lines are heard.

Just like a storyteller develops techniques for creating and releasing tension, jazz musicians do the same with their music. For both forms of expression, time is a central component. Working within a set time while also creating an interesting movement and development of tension takes the listener on a journey.

> "The "fundamental musical problems" we will address in the study of counterpoint center around the way in which some basic principles of auditory perception and cognition (how the brain perceives and conceptualizes sound) play out in Western musical structure. For example, our brains tend to assume that sounds similar in pitch or timbre come from the same source. Our brains also listen for patterns, and when a new sound continues or completes a previously heard pattern, it assumes that the new sound belongs together with those others. On the other hand, the breaking of these regularities in the sonic environment can signal danger, or at the very least the need for heightened attention to be applied to the sonic "culprit." Identifying irregularities in the sonic environment and boosting attention and adrenaline when one is found have been absolutely essential to the survival of the human species. These abilities are also what allows music to have the emotional effect that it does on so many people." [7]

[7] JEKYLL, "Introduction to Strict Voice-Leading," http://openmusictheory.com/speciesIntro.html?fbclid=IwAR3rxlO70-CeE09Um_bzh9jHavHfOsBBwJ6BsEvvjP4XePkDZHsAHeGOh0E.

When starting to learn how to play an instrument, developing both an interesting arch within one's solos as well as creating the entire tune are skills that are not within reach. As such, it is still of great importance to develop basic skills and to lay a strong foundation. Once this is done, it becomes more important to cultivate the skills needed for more advanced improvisation which include good communication. The dynamics of a band working together are crucial to the arch of tension in a musical piece. It is almost impossible to achieve an interesting composition when the band does not work together as a team. Voice leading helps musicians to become more knowledgeable of how the "voices" that they choose to base their solos upon have an impact on the piece they are performing.

> "Voice-leading deals with the relationship of two or more musical lines (or melodies) combined into a single musical idea."[8]

Next we will discuss guide tones: what they are, and how they are connected to voice leading. Within chord progressions, guide tones are markers for the change in harmony that is taking place. As explained by Josiah Boornazian in his article How to Use Voice Leading in Your Jazz Solos, guide tones can be roots, 5ths, 3rds, 7ths, 9ths, 11ths and 13ths. However the 3rds and 5ths are chosen most often since they determine whether a chord is minor, major, or dominant. There is more than one right way to choose the guide tones to be used. One's ears are central when choosing guide tones for a particular song, since they indicate which notes reflect the changes in harmony best.

There are two forms in which guide tones can be practiced: by themselves as quarter notes, half notes and whole notes or within voice leading as the basis of more complex melodies.

[8] ibid.

> "Keep in mind that guide-tone melodies are most effective if they are chord tones that move in a stepwise manner from one chord to the next. Since the roots and 5ths are most likely covered by the bassist, 3rds and 7ths are usually the strongest starting places to build a solid guide-tone line. 3rds and 7ths almost always play a very important role in defining the nature and character of the chord (in other words the "chord quality")."[9]

The character of the chord also relates to the psychology of music and our perception of different sounds and musical movements.

> "The 3rd degree is the most stable sounding note and the 7th degree sounds the most unstable. This is the reason you find many melodic lines that move from the 7th of a chord to the 3rd of the next chord in order to outline this tension and release." [10]

> "Voice leading therefore also refers to that sense of forward harmonic propulsion – the feeling that the music is "going somewhere" and that it's being driven in part by the moving and changing harmonies. Pitches that move in a stepwise fashion from one chord to the next in a given progression can be said to voice-lead in a clear way. If you create a melody based on a series of chord tones that move stepwise through a harmonic progression, you have a guide-tone line." [11]

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[9] Boornazian.

[10] "Guide Tones," https://www.thejazzresource.com/guide_tones.html

[11] .

Consequently, guide tones have an essential role in voice leading, which is the reason why they are so useful for jazz musicians. Being able to have a structure in place to guide solos makes improvisation far easier. But in order for guide tones to be useful, we first need to examine how they have traditionally been practiced and how they can be improved through the incorporation of the loop pedal.

2.3 Practicing Voice Leading with a Piano

The piano has long been a tool for practicing voice leading. To start practicing with the piano, a desired chord progression is selected such as ii – V – I or I – VI – ii – V. This type of chord progression is very simple to start with. One can also use the dominant 7th chord in the circle of fifth, as shown in chapter 3.2.

There are two basic methods that can be used. The first is to play the 3rd or 7th of a chord from the progression and sing the bass note. The other is to play both of them and to sing the bass note below. Afterwards the inverse occurs by playing the bass note and singing the 3rd and 7th of the chord. It is also a good option to add variation by practicing both open and closed voice leading this way. That means also including the 5th, 9th, 11th, and 13th. Voice leading with the piano can make use of all the chords within the chosen chord progression.

The practice of voice leading with the support of the piano is also advised by the legendary saxophonist Mark Turner:

> "Mark emphasizes the importance of understanding the fundamentals of voice leading in this chapter, especially for horn players. Because the saxophone is not a polyphonic instrument, it is helpful to practice alongside a piano when studying voice leading. For Mark, he will start by playing a basic progression on the piano with the root, 3rd, and 7th while making sure that the 3rds and 7ths are either resolving by whole-step, half-step, or carrying over to the next chord

as a common tone wherever possible. He then translates this exercise onto his saxophone and plays it verbatim."[12]

2.4 Piano vs. Loop Pedal

When comparing the piano and the loop pedal for voice leading practice, it is quite obvious that the piano is the tool of choice when simply training one's ear. It is useful for a wide range of users from students to professionals. For beginners, it is helpful to be able to see how the voice leads moves over the piano keys. Clearly, when one has a real piano in a practice room, it is advisable to use it to practice voice leading along with other parts of ear training, but that luxury is not always available.

There is, however, another way to practice voice leading on an advanced level that does not require a piano and supports the practice with the horn: The loop pedal. It is relatively easy to transport, especially compared to a piano, and can be found at an affordable price. Fortunately, numerous versions of this equipment are available on computers, including simple loop pedals and also more complex set ups that can be tailored to the needs of the musician using it.

For voice leading practice with the loop pedal, most contemporary pedals should prove sufficient. The most important point to keep in mind when choosing the equipment is the built in memory, since that ultimately affects two major aspects: the complexity one can reach in each loop and the number of loops that can be saved on the device. Memory has drastically increased over the last twenty years. In contrast to a piano, the loop pedal is more akin to a blank canvas. Its functionality depends on the abilities of the person using it. Some technical knowledge is needed in order to set up and control a loop pedal, but one can start with a simple set up and further expertise can be developed over time. It is also important to note that the loop pedal can be paired with the saxophone and can also be useful in ear training for other non-polyphonic instruments. It can even be paired with the piano since one could play a

[12] Mark Turner, *The Mastery of Voice Leading for Linear Improvisation – Fundamentals*.

section on the piano, record it onto the loop pedal and then have it looped back for practice.

Example 2.2: Strength of the loop pedal in comparison with the piano in the context of voice leading practice

Characteristic	Loop Pedal	Piano
Practice harmony and pitch	Possible but less straight forward	Very good due to acoustic sound
Combination with one's saxophone	Very compatible due to the option of recording sections on the loop pedal, letting them loop and playing on top of them	Possible but impractical, holding the saxophone on one's side, playing a chord and letting it continue with help of the sustain pedal
Portability	Very portable, but needs some setting up	Not portable but very simple setup
Affordability	Simple setup is reasonably affordable	Comes at a high price point
Background for practice	Very flexible, can be used to create both simple and complex backgrounds.	Not possible unless a second player assists

Table 2 Strength of the loop pedal in comparison with the piano in the context of voice leading practice

When working with a loop pedal for the first time, finding a good setup may appear daunting, but the difficulty is not insurmountable. A very simple setup can be used to start and then adapted to fit one's needs. The set up shown below would be a good starting point.

It is also important to know that when recording the bass line on the loop pedal, there are two options: the first one is to play it on the piano and record it on the loop pedal while the second one is to play it with the saxophone and use an octave effect or a pitch shifter to change the sound of the saxophone into a lower octave when recording it onto the loop pedal. These effects are set between the Impedance Matching Transformer and the loop pedal.

Example 2.3: Simple loop pedal setup (Option I)

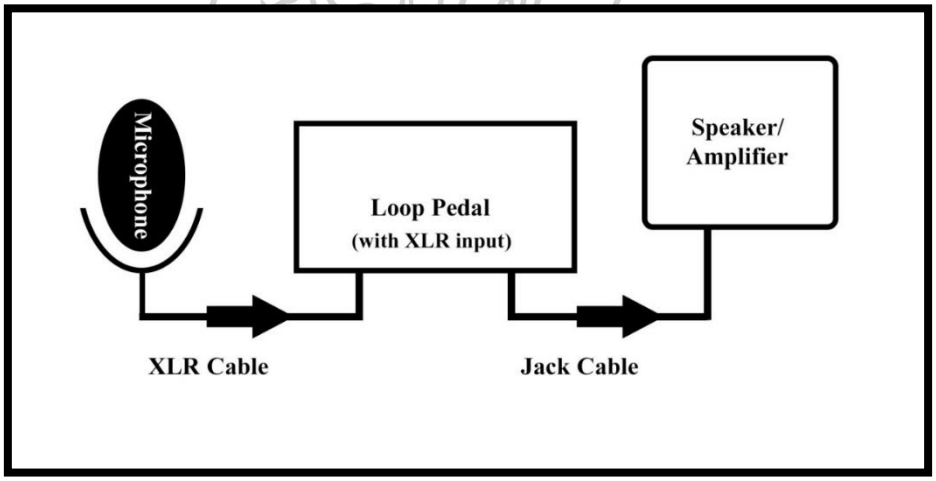

Figure 1 Example 2.3: Simple loop pedal setup (Option I)

Example 2.4: Simple loop pedal setup (Option II)

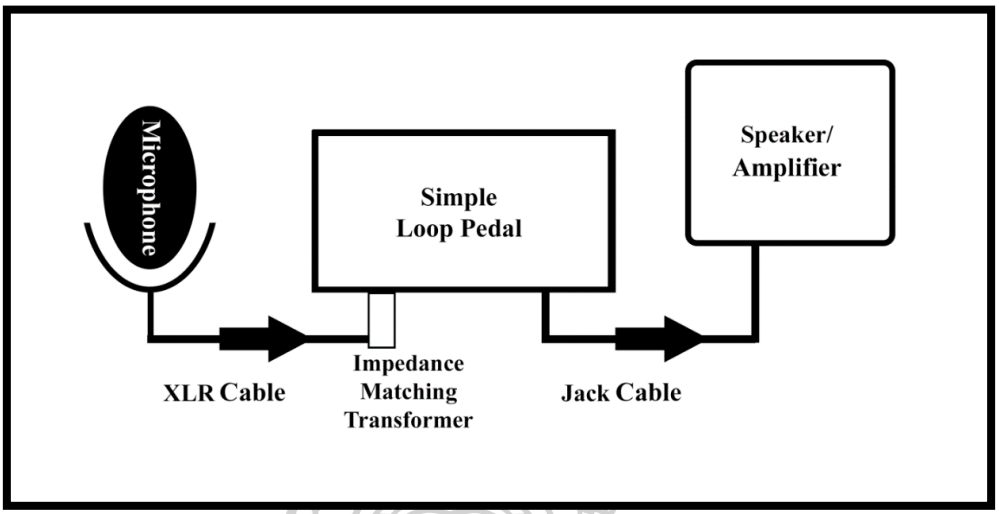

Figure 2 Example 2.4: Simple loop pedal setup (Option II)

2.5 Practicing Voice Leading with a Loop Pedal

The comparison of the loop pedal to other technologies within the wider sphere of saxophone practice and especially to the piano in voice leading practice shows just how versatile and useful it really is. In view of this it makes sense to take a look at the loop pedal's history and see how it developed. This will not only widen the understanding of how it came to be, but also be helpful when choosing a loop pedal to fit one's personal needs and preferences.

The history of the loop pedal has been unfolding over the last 150 years. It strongly relates to the wider role that repetition has played in music throughout history and in different cultures around the world. Using loops in music may be considered ancient, since they have been used in different types of music all over the world and throughout history.

But the modern loop pedal is, as one can imagine, still relatively new, so let us start with its predecessors and all the devices that were used to create loops over the last 150 years. The rapid development towards modern loop pedals took off due

to the rapid growth in technology and conceptual movements from the time of the invention of the gramophone in 1887 and onward. As explained by Michael Peters in his article “The Birth of Loop”.

> “Inspired by the meeting of world cultures, aided by technology, pioneered by visionary composers, looping music was born.” [13]

From the gramophone, one can make a connection to all three of the technologies that have already been discussed: The loop pedal, the play along and iReal. The first experimentation to turn records into loops occurred between the two world wars.

From its beginnings to its current state, looping has undergone a grand transition and is now being used in all types of music and performance, which was unimaginable in its humble beginnings.

The next step in the development towards what we now know as the loop pedal was the invention of tape recorders in Germany in 1935. However, it took until around 1950 for these tools to come on the market in America. This new device inspired, Pierre Schaeffer and Oliver Messiaen to make their first famous compositions using cut loops out of tape. John Cage, Edgard Varèse and others created the first sound collages using tape recorders. The growth in interest led to the foundation of new electronic music studios in the late 1950s and early 60s which grew in influence over time. Over in Paris, in 1963, Terry Riley invented the “Time-Lag-Accumulator,” a machine capable of recording a phase and playing it back, which became the prototype for the live looping devices that are being used today. Of course there could be much further discussion regarding different musicians who brought our current understanding of “the loop” and all its possibilities to its current state, but since this

[13] Peters.

does not directly relate to “the loop” being used for voice leading practice, these musicians will not be discussed at length.

Since the 1980s a lot has changed in the functions of loop pedals. Early modern machines were highly advanced in comparison to previous models, but still quite difficult to use. Therefore function and usability became top priorities for developers at the time.

> “After this the digital wave hit, and delay and loop effects have grown and grown beyond anything the people of the past were creating. Today, people can use computers for looping, along with many different types of pedals and rack units.” [14]

The digital age has set up new possibilities as well as challenges for manufacturers. Before, there had been a linear development, one technology led to another, but in the digital era, that progression became less clear. A clear picture of the characteristics that one is looking is needed before purchasing this type of equipment since pedals vary widely in function and capacity. In 2004 progress accelerated considerably with the DigiTech JamMan Looper, as it became capable of recording times up to 6.5 hours. The longer recording times drastically changed the possibilities for artists working with the loop pedal, giving them room for longer compositions than ever before.

The number of tracks recordable on a loop pedal is also essential as it influences the number of sections of a song that can be made. This is noteworthy, as it is both useful for live looping as well as composing.

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[14] Live Looping: The History And The Practice by Stephen Garza, http://computermusic2008.wikidot.com/live-looping:history-and-the-practice?fbclid=IwAR3KIbLaylv2rxmSla3Oi3qGe_eg2mxAPmdRO5Riv03ankdhALJKdzjtF_A.

These days we are at the brink of the next big era as the lines between pedals and computers begin to blur leaving much to be guessed as to how looping will be impacted in the long run.

Hopefully these developments will lead to more accessible looping, as well as develop the potential of the medium even further.

What we are going to do next is diverge from the notion of counting down different models and their functions seeing as many were brought on the market in the last 40 years and not all of these devices have caused significant jumps in the development of the loop pedal so instead we shall just focus on some of the functions that have been developed and how they are helpful for saxophone practice. It is however useful to see how recording times have lengthened and the development has spread in different directions, catering to different forms of use.

Example 2.5: Overview of the Evolution of the Loop Pedal – Part I

Year	Device	Main Technology	Special Functions & Musicians/Composers
1887	Gramophone	Gramophone	Sound recording and playing it back Milhaud, Hindemith, Varèse, Cage and others
1935	Tape recorder	Tape Recorder	Audio can be recorded and re-recorded multiple times. Recordings can be edited and rearranged. (Music collages)

			Pierre Schaeffer, Oliver Messiaen, John Cage, Edgard Varèse and others
1963	Time-Lag-Accumulator	Tape Recorder	Tape delay/feedback system, a long repeated loop between two tape recorders Terry Riley, Chet Baker, Pauline Oliveros, Brian Eno, and Robert Fripp
1979	Frippertronics	Tape Recorder	Tape looping technique, analogue delay system, similar to Time-Lag-Accumulator Robert Fripp
1981	Lexicon (Rack unit)	Digital	Memory 4,8 Seconds David Torn
1982	Avion DDS-4 (Pedal)	Digital	Memory 4 Seconds, Stereo
1983	Electro Harmonix EH 16 (Pedal)	Digital	Memory 16 Seconds

	"Fripp in the Box"		
1993	Paradis Loop Delay	Digital	LD1 Digital Delay, RAM Recorder, Ostinator Mathias Grob
1994	Lexicon SamMan (Rack)	Digital	Memory 8-32 Seconds
1999	Line6 DL-4 (Pedal)	Digital	Dynamic Mic, (Vocal) Memory 14 seconds and easy control

Table 3 Overview of the Evolution of the Loop Pedal – Part I

Example 2.6: Overview of the Evolution of the Loop Pedal – Part II

Year	Device	Main Technology	Special Functions & Musicians/Composers
2001	Boomerang I (Pedal)	Digital	More for live performance, Half-Speed Function, Cannot save loop
2001	Line 6 Echo Pro	Digital	Memory 60 seconds

	(Rack)		
2001	Electrix Repeater (Rack)	Digital	Uses DSP tech, with MIDI
2001	Boss RC-20 (Pedal)	Digital	5 minutes 30 seconds sampling time, Guide Click, Loop Quantize functions, Changing tempo without changing pitch, save 10 phrases
2004	Boss RC-20 XL (Compura with Mang)	Digital	Memory 16 Minutes Michael Donahue
2004	DigiTech JamMan Looper	Digital	Memory 6,5 Hours, 99 Track, USB, 2 GB card Wolfgang Muthspiel
2004	Electro-Harmonix (Reissue)	Digital	Memory 4 Minutes, change pitch and tempo, reverse function, more effects
2005	Electro-Harmonix 2880	Digital	4 multitracks, Memory 31 Minutes, memory card

2006	Boss RC 2	Digital	Memory 16 Minutes, 11 phrases stored, Aux. Input to capture phrases from external audio devices, External Pedal Input (stop/tempo)
2007	Boss RC 50	Digital	3 stereo phrase tracks simultaneously, Memory 49 minutes, USB import/export
2010	Digitech JamMan Stereo	Digital	Memory of 35 minutes, 99 internal memories, SD memory card slot
2010	Digitech JamMan Delay	Digital	Memory of 35 minutes, 99 internal loop memories, SD card expansion slot, USB connectivity, 8 delay types, 3 pre-set memories

Table 4 Overview of the Evolution of the Loop Pedal – Part II

Example 2.7: Overview of the Evolution of the Loop Pedal – Part III

Year	Device	Main Technology	Special Functions & Musicians/Composers
2010	Digitech JamMan Solo	Digital	Memory of 35 minutes, 99 internal memories, SD memory card slot, compact form
2010	Hexe Revolver	Digital	Pitch shifting mode, micro looper
2011	VOX DLI	Digital	2 Loop + Effects

2011	Boss RC-3	Digital	1 Track, Memory 3 hours
2011	Boss RC-30	Digital	2 Tracks, Memory 3 hours
2011	Boss RC-300	Digital	3 Tracks, Memory 3 hours, Sync
2012	JamMan Solo XT	Digital	Sync, Memory 35 minutes of stereo sound
2012	TC electronics Flashback X4	Digital	40 second looper with undo/redo
2012	VOX delayLab	Digital	28 Seconds of Stereo Looping
2012	VOX Lil Looper	Digital	90 Seconds of Stereo Looping, 2 tracks
2013	Boss RC-505	Digital	Operated with Hands, 5 Tracks with Dedicated Controls
2013	Electro Harmonix 45000	Digital	125 Minutes Memory, 100 individual loops
2013	TC Electronics Ditto	Digital	5 Minutes Looping Time
2013	Digitech JamMan Express XT	Digital	10 Minutes Looping Time

2014	TC Electronic Ditto x2	Digital	2 Tracks, 5 Minutes Looping Time
2018	Electroharmo-nic 95000	Digital	375 Minutes Memory

Table 5 Overview of the Evolution of the Loop Pedal – Part III

Since the development of looping started out linearly, but then grew in a number of different directions, there is no completely neutral angle from which to compare all of the devices that are on the market today. What may be ideal for one user is not necessarily the best or most important for another. This makes it crucial to know one's needs in order to decide on a fitting loop pedal.

In this chapter, the term "voice leading", as well as its relationship to guide tones has been further defined. The traditional method of practicing voice leading with the piano, the reason why it is useful, as well as some of the problems that accompany this method of practice have also become visible. Furthermore, the piano and the loop pedal have been compared in their abilities to support voice leading practice. A summary of the development of the loop pedal has also been provides, as well as some of information on the artists that have shaped its history.

We are moving closer to the specific exercises that have been developed as a basis for voice leading practice. As mentioned earlier, these exercises should be taken as the starting point for the development of more personal ones. They can easily be adjusted to match any tune that one may be practicing. Next up, the circle of fifth will be used to explain further how these exercises were constructed, followed by a look at their development.

2.6 The Circle of 5th

Having seen the traditional method of practicing voice leading with the piano, as well as how voice leading practice can be improved with the loop pedal, we are now moving on to the example of the circle of fifth. This example will be used to show how guide tones smoothly lead to one another. This clarifies further how voice leading is helpful for creating interesting solos.

Here the manner in which voice leading moves along within the circle of fifth to create a smooth movement in sound is represented visually. One can see how the 3rd and the 7th lead to one another, as well as the 5th and 9th. This first one is a dominant 7th chord in the circle of fifth. In this progression 3rd and 7th move along each other chromatically.

Example 2.8: Circle of 5th dominant

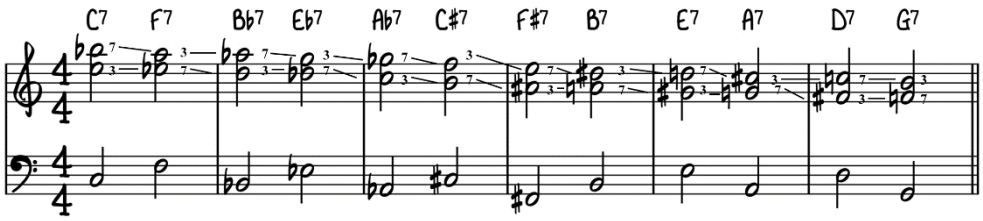

Figure 3 Circle of 5th dominant

In this chapter, practicing voice leading with the loop pedal has transitioned from being purely theoretical to being practical as explained through the example of the circle of fifth. The new exercises that follow in chapter 4, have the potential of being very different from approaches to practice voice leading with the piano, since the nature of the loop pedal is far more flexible than that of the piano. With a contemporary loop pedal there is almost no limit to the length of the recorded section. This is what makes the loop pedal so useful for creating backgrounds for voice leading practice.

2.7 Development of exercises for the loop pedal

In this chapter we have repeatedly seen the power of the loop pedal to transform jazz saxophone practice, both in the wider picture of a general practice routine and especially for voice leading practice. The loop pedal is more flexible than both, iReal B and play alongs, and can also be used for voice leading practice both, with the piano and the saxophone. The possibilities to create personal exercises that work for different levels is endless.

This insight did not come out of nowhere. It started all the way back when I studied with Chris Cheek. The topic of practicing voice leading with the loop pedal came to my attention due to my studies with him. He was the first one to introduce me to the loop pedal as a tool to work on my improvisation skills and after having studied with him, I took what I had learned and started to develop my own exercises.

I took up lessons with Chris Cheek in New York and in our session he set up a Rhodes piano with Boss RC2 and a metronome. He started out by recording the bassline of “conformation” a bebop song by Charlie Parker onto the loop pedal. Than we went on to jamming alongside each other, soloing one chorus each, using the bass line from the loop pedal as a background. We also used short progressions to practice improvising chord tones and simple scales like major pentatonic. He also taught me how to make a short progression by myself, in order to use it as backdrop for my own improvisation practice.

His advice was to start out with something simple like a chord tone or major pentatonic and to then build an improvisation line from there. Since studying with him, I have continued to build my knowledge on the loop pedal and used it to develop this method to practice voice leading.

The following chapter will show how to use the exercises that were made for this thesis. They are constructed to be used with the saxophone, an octave effect and the loop pedal.

3

Combining Chord Progression with Guide Tone Resolution

In addition to a theoretical approach to practice, it is also necessary to discuss a practical approach. The exercises included in the following chapter serve as a starting point for practicing voice leading with the loop pedal. Seeing as a well-rounded understanding of both voice leading and the loop pedal has been set up, we can move on to the practical exercises for use in combination with the saxophone, the octave effect and the loop pedal.

3.1 Turnaround

The following exercises will take place in the shape of turnarounds due to the fact that their form lends itself to practice with the loop pedal in light of them both based on the same basic principle of repetition. In jazz standards, turnarounds are responsible for over half of the harmony and are therefore crucial for improvisation. Keys are established through the diatonic progression of ii – V – I, which also create cadences in jazz. P 46 the goal note method by Shelton Berg

> "The primary definition of a turnaround is a chord sequence that facilitates the repetition of the form. It helps to bring the music from the end of a chorus (one time through the chord progression of the tune) back to the beginning of the next chorus. A turnaround takes one from the bottom to the top of the tune." [15]

[15] Dr.Mark Watkins, "Substitutions and Turnarounds," no. 04.05.2019

According to Dr. Mark Watkins, there are three types of turnarounds: turnaround to top of form, section delineation, as well as vamps and circular progressions. However, we will only be using vamps and circular progression.

Example 3.1 I – iv – ii – V vamps

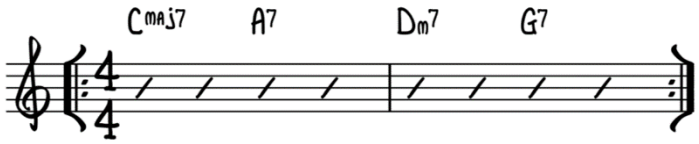

Figure 4 Example 3.1 I – iv – ii – V vamps

> "Because turnarounds are so common they are also a good place to start when practicing playing over faster moving changes. By faster moving changes I mean 2 chords per bar which is something that already in medium tempos can be hard to navigate in a musical way, and play something that makes sense melodically. If you have 2 chords per bar and improvise in 8th notes then you have to make a melody with 4 notes from one chord and 4 from the next, this can be quite tricky at times."[16]

Now that a basic understanding of the principles behind turnarounds has been established, a number of the most common turnarounds from Jazz standards can be combined. There are two types of turnarounds in this collection. The first of these is based on the circle of 5th, and the other one is based on tritone substitution. These turnarounds help to show that there is a variety of possible approaches to practice

[16] Jens Larsen, "The Turnaround," Jazz Guitarist and Composer, https://jenslarsen.nl/turnarounds-part-1-i-vi-iiv/fbclid=IwAR0tIIIi9NZ8mFix3EyhpPc0oJCw_O2WMJdBOdi5JK_bb6t41cEGye8Si24.

voice leading with turnaround progressions. These progressions are from Dr. Mark Watkins in his article on Substitutions and turnarounds. Watkins, Mark, Substitutions and turnarounds March 25, 2019 [17]

Example 3.2: Turnaround based on circle of 5th

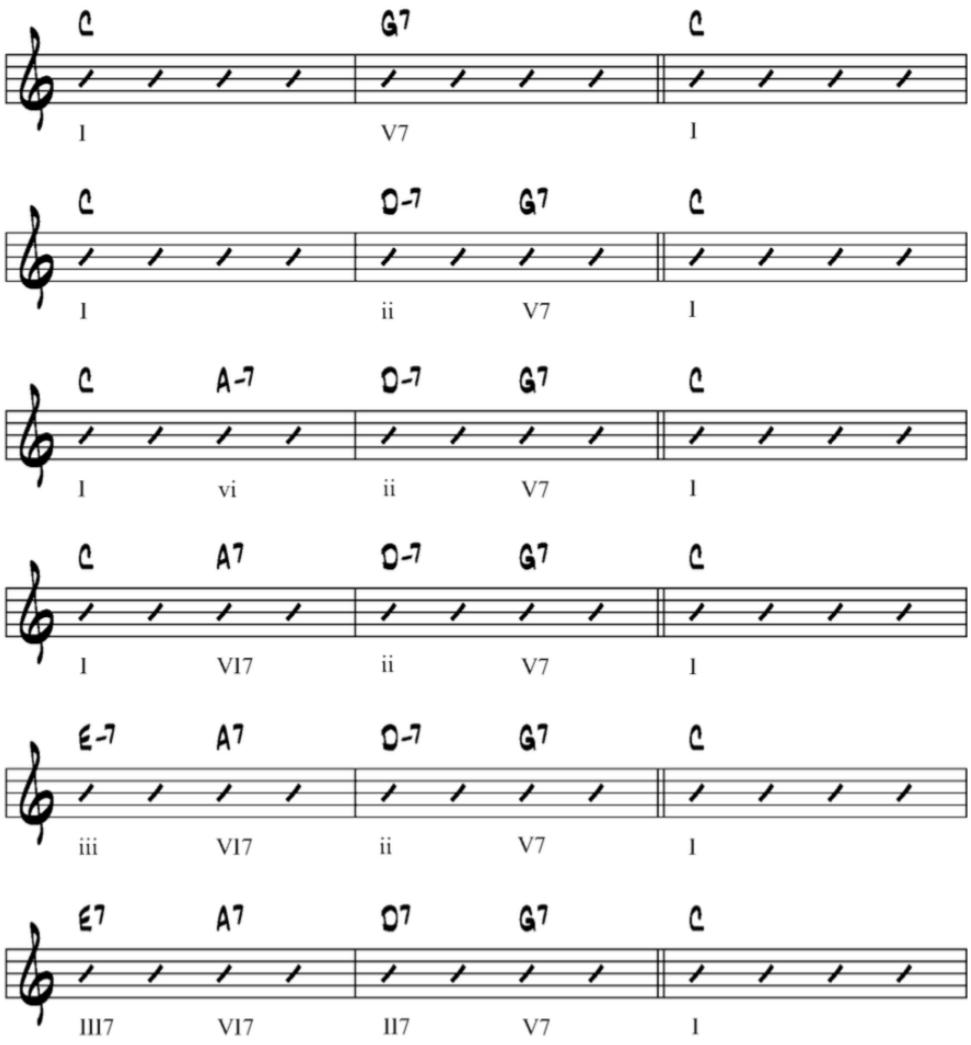

Figure 5 Example 3.2: Turnaround based on circle of 5th

[17] Mark Watkins, "Substitutions and Turnarounds."

Example 3.3: Turnaround based on tritone substitution I

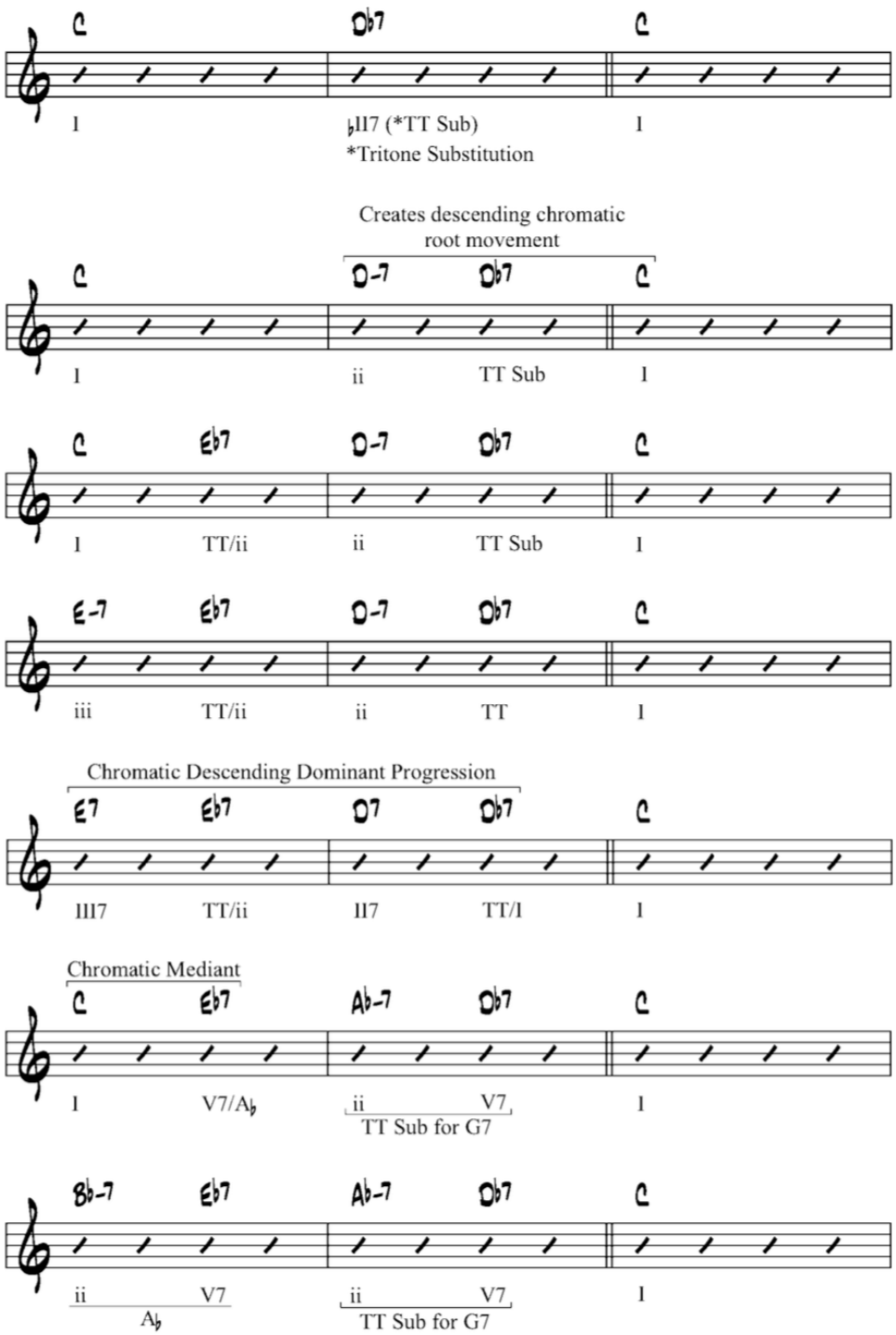

Figure 6 Example 3.3: Turnaround based on tritone substitution

Example 3.4: Turnaround based on tritone substitution II

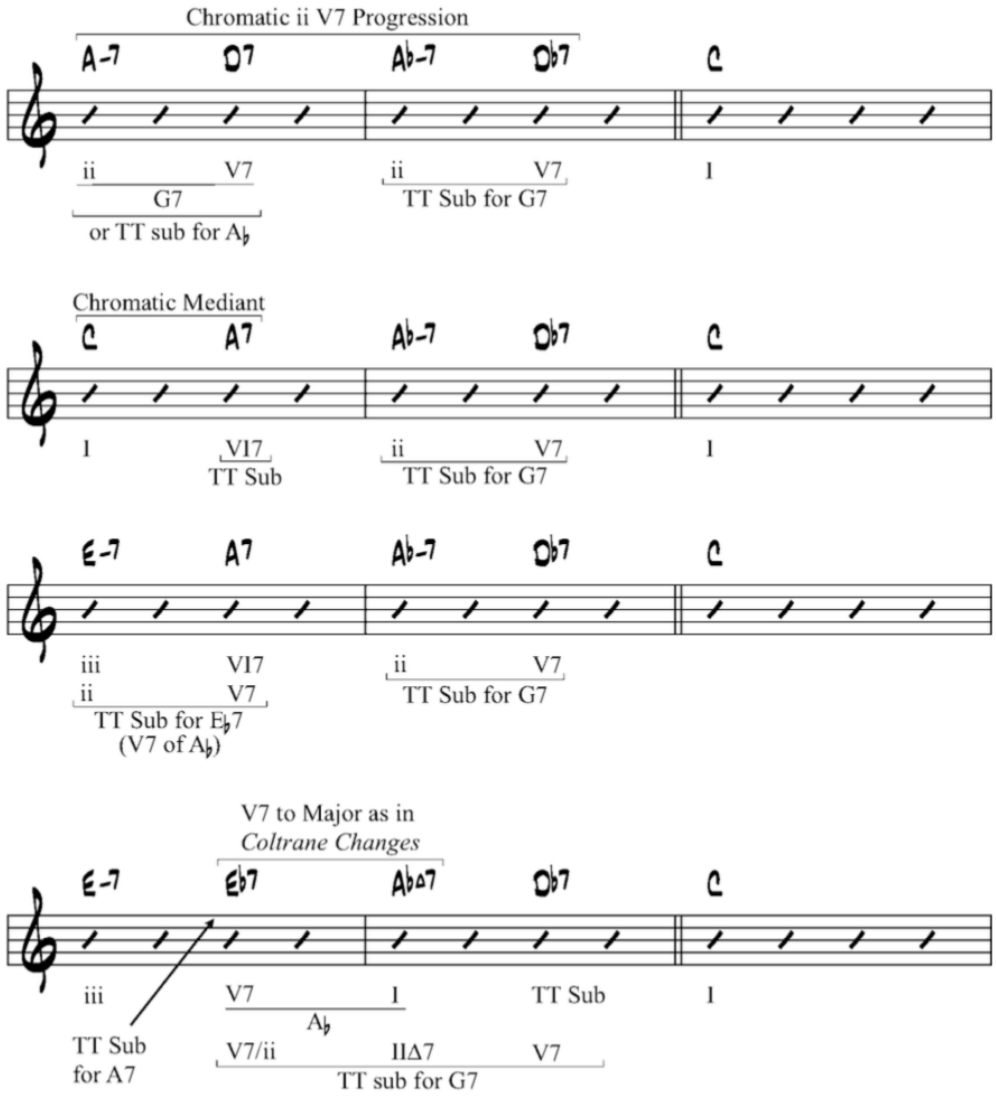

Figure 7 Example 3.4: Turnaround based on tritone substitution II

The progressions above show different options for reharmonisation to take place within turnaround progressions. These are the basis for the exercises in this thesis.

Now that the basic shape of the exercises is clear, the arrangement with which they are structured and the reason why this system is effective for voice leading practice needs further explanation.

3.2 Guide Tone Resolution

The guide tones in this first example start similarly to the second line in Chords 1, but they are set up in a slightly different arrangement. If they were being pulled on top of each other into just four bars, they would look the same as they look in the short version.

Example 3.5 Voice leading resolution I

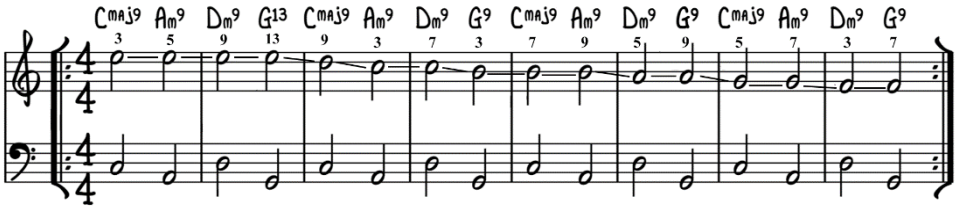

Figure 8 Example 3.5 Voice leading resolution I

The only important consideration is to connect to the right tone in the first chord when reaching the end. Than the same chord tone should always be played at the beginning as has just been done, but this should be carried out in a different octave than the previous one. When everything is connected, the loop becomes larger and can be practiced over and over again. This way a lengthier exercise can be condensed into just four bars.

Using voice leading to practice will lead to the observation that there are multiple guide tones that can be chosen to start the line with. For example, if one starts with 3rd (E) of Cmaj9, E will be the 5th of Am9, the 9th of Dm9 and the 13th of G13, which leads to the 9th (D) of Cmaj9. This is visible in Guide tone table 1 as well.

3.2.1 Turnaround progression I: I – vi – ii – V

Example 3.6: Guide tone resolution turnaround progression I: I – vi – ii – V

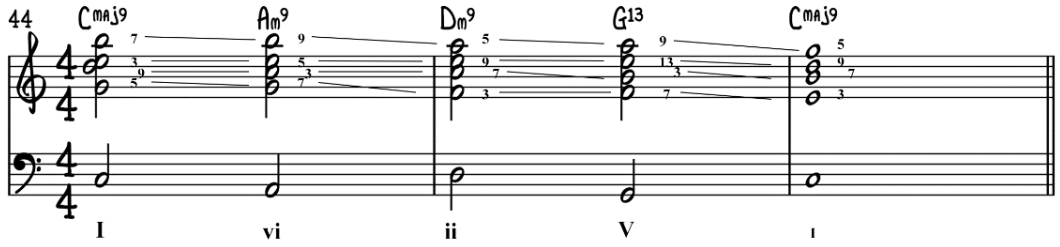

Figure 9 Example 3.6: Guide tone resolution turnaround progression I: I – vi – ii – V

The example just shown was for the piano, but the following ones will be for the loop pedal and the saxophone. It is advisable to practice a short chord progression like a turn around with the loop pedal. This exercise is similar to the practice of voice leading using the piano, but goes a step further. In this case, the loop pedal takes the role of the piano and the saxophone takes on the role of one's voice. There will be more specific exercises in the following chapter, but first there are a few examples that demonstrate the manner to read and use these exercises. When practicing a particular progression, the whole progression could be fed into the loop at once, but that would not actually help to improve the sections that remain challenging. Each section is practiced separately to focus on specific issues.

In order to understand and use the given exercises, we need to first see an example. When using this material to practice, one starts out by feeding the bass line into the loop pedal in order to let it loop and to have the appropriate background to then play the guide tones on top.

Example 3.7: Guide tone resolution turnaround progression I: I – vi – ii – V

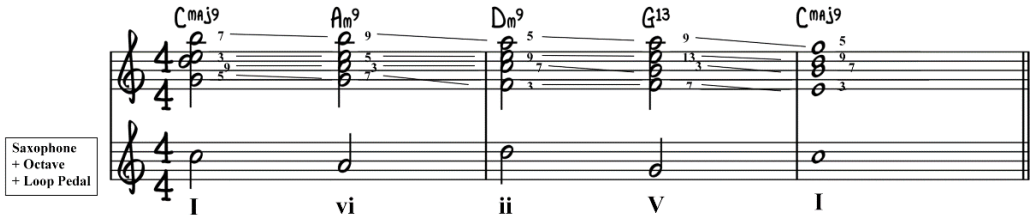

Figure 10 Example 3.7: Guide tone resolution turnaround progression I: I – vi – ii – V

The saxophone range is not as wide as that of a piano, so a special effect called an octave is needed in order to change the pitch to be one or two octaves lower and not interfere with the guide tone pitch. This setup from the second version of chord 1.1 will be used in chapter 4 for all of the exercises that are given.

The notes from the last voice leading example have been transformed into a table in order for it to be more easily understandable. If one starts with the 3rd degree of chord I, which leads to the 5th degree of chord vi (VI), followed by the 9th degree of chord ii, then the 13th degree of chord V and the 9th degree of chord I. Next up are the 9th degree of chord I, the 3rd degree of chord vi (VI), the 7th degree of chord ii, the 3rd degree of chord V and the 7th degree of chord I. This then leads to the 7th degree in chord I and so on.

Example 3.8: Guide tone table turnaround progression I – II: I – vi – ii – V

I	vi / VI	ii	V	I
3 →	5 →	9 →	13 →	9
5	7	3	7	3
7	9	5	9	5
9	3	7	3	7

Figure 11 Example 3.8: Guide tone table turnaround progression I – II: I – vi – ii – V

In this chapter, the basic principles behind the exercises have been further explained. All of the exercises lend themselves to be practiced with the saxophone, the octave effect and the loop pedal. But as mentioned earlier in this thesis, they could easily be transformed to be utilized with other instruments as well. The octave effect helps to adjust the range of the saxophone, but may also be helpful for other instruments, that present similar difficulties to the saxophone.

For each of the exercises, there is one guide tone line, one table and one improvisation line. In some cases improvisation lines are shared between exercises and can be found in an earlier exercise.

3.2.2 Turnaround progression II: I – VI – ii – V

This progression is also represented in Guide tone table 1.

Example 3.9: Guide tone resolution turnaround progression II: I – VI – ii – V

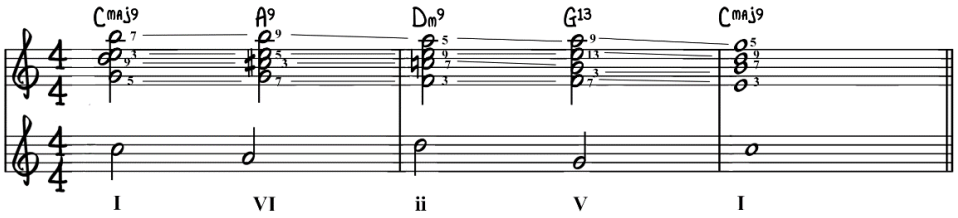

Figure 12 Example 3.9: Guide tone resolution turnaround progression II: I – VI – ii – V

As in the first example, the second guide tone resolution is based on the first table. When reading this guide tone resolution, one can start with the 7th degree of chord I, which leads to the 9th degree of chord VI, followed by the 5th degree of chord ii, then the 9th degree of chord V and the 5th degree of chord I. Next up are the 5th degree of chord I, the 7th degree of chord VI, the 3rd degree of chord ii, the 7th degree of chord V and the 3rd degree of chord I. This then leads to the 3rd degree in chord I and so on.

3.2.3 Turnaround progression III: iii – VI – ii – V

Example 3.10: Guide tone resolution turnaround progression III: iii – VI – ii – V

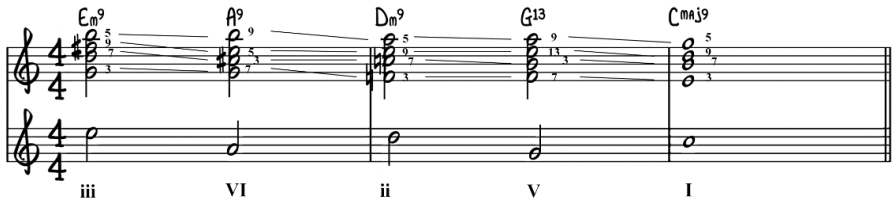

Figure 13 Example 3.10: Guide tone resolution turnaround progression III: iii – VI – ii – V

The third guide tone resolution is based on Guide tone table III. When reading this guide tone resolution, one can start with the 5th degree of chord iii, which leads to the 9th degree of chord VI, followed by the 5th degree of chord ii, then the 9th degree of chord V and the 5th degree of chord I.

Another option would be to start with the 9th degree of chord iii, the 5th degree of chord VI, the 9th degree of chord ii, the 13th degree of chord V and the 9th degree of chord I.

Similarly one could also start with the 7th or the 3rd degree of chord iii.

Example 3.11: Guide tone table turnaround progression III: iii – VI – ii – V

iii	VI	ii	V	I
3	7	3	7	3
5	9	5	9	5
7	3	7	3	7
9	13	9	13	9

Figure 14 Example 3.11: Guide tone table turnaround progression III: iii – VI – ii – V

3.2.4 Turnaround progression IV: III – VI – II – V

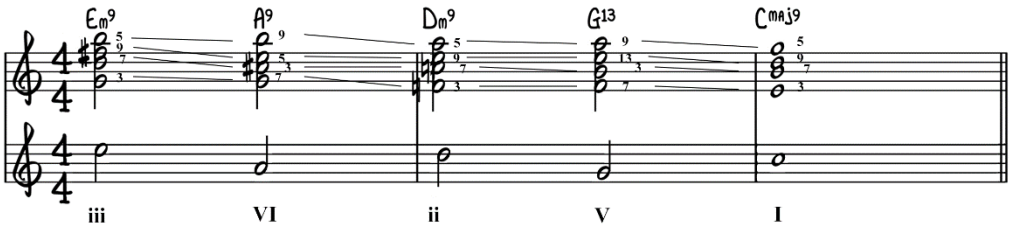

Figure 15 3.2.4 Turnaround progression IV: III – VI – II – V

Example 3.12: Guide tone resolution turnaround progression IV: III – VI – II – V

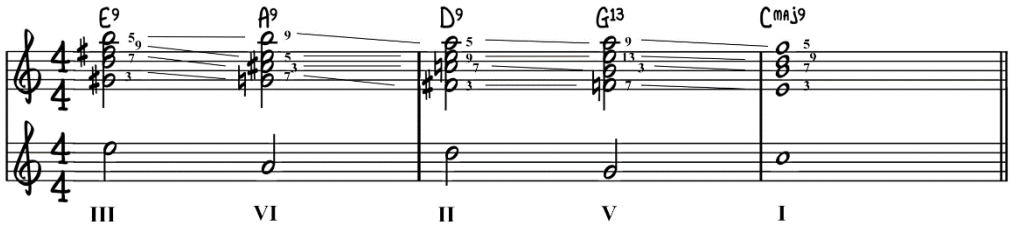

Figure 16 Example 3.12: Guide tone resolution turnaround progression IV: III – VI – II – V

This fourth guide tone resolution is based on Guide tone table IV. When reading this guide tone resolution, one can start with the 5th degree of chord III, which leads to the 9th degree of chord VI, followed by the 5th degree of chord II, then the 9th degree of chord V and the 5th degree of chord I.

One could also start with the 9th degree of chord III, the 5th degree of chord VI, the 9th degree of chord II, the 13th degree of chord V and the 9th degree of chord I. Similarly one could also start with the 7th or the 3rd degree of chord III.

Example 3.13: Guide tone table turnaround progression IV: III – VI – II – V

III	VI	II	V	I
3	7	3	7	3
5	9	5	9	5
7	3	7	3	7
9	13	9	13	9

Figure 17 Example 3.13: Guide tone table turnaround progression IV: III – VI – II – V

3.2.5 Turnaround progression V: I – TT/VI – ii – TT/V

Example 3.14: Guide tone resolution turnaround progression V: I – TT/VI – ii – TT/V

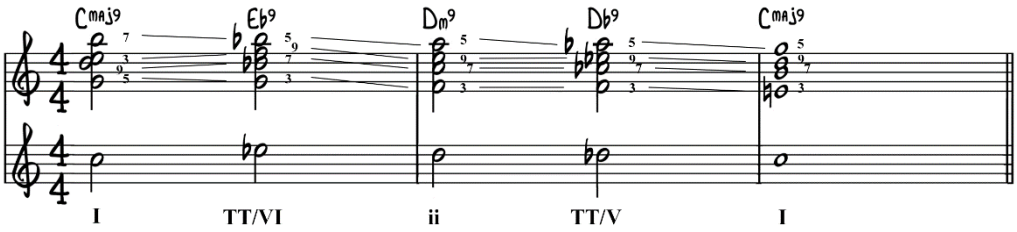

Figure 18 Example 3.14: Guide tone resolution turnaround progression V: I – TT/VI – ii – TT/V

The fifth guide tone resolution is based on Guide tone table V. When reading this guide tone resolution, one can start with the 7th degree of chord I, which leads to the 5th degree of (tritone substitution) chord TT/VI, followed by the 5th degree of chord ii, then the 5th degree of chord TT/V and the 5th degree of chord I. Next up are the 5th degree of chord I, the 3rd degree of chord TT/VI, the 3rd degree of chord ii, then the 3rd degree of chord TT/V and the 3rd degree of chord I. This then leads to the 3rd degree in chord I and so on.

Example 3.15: Guide tone table turnaround progression V: I – TT/VI – ii – TT/V

I	TT/VI	ii	TT/V	I
3	9	9	9	9
5	3	3	3	3
7	5	5	5	5
9	7	7	7	7

Figure 19 Example 3.15: Guide tone table turnaround progression V: I – TT/VI – ii – TT/V

3.2.6 Turnaround progression VI: iii – TT/VI – ii – TT/V

Example 3.16: Guide tone resolution turnaround progression VI: iii – TT/VI – ii – TT/V

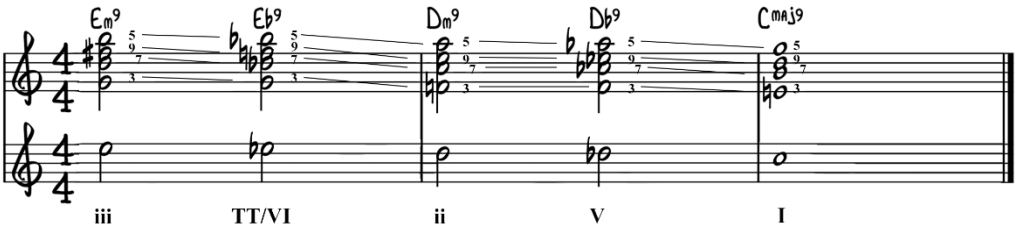

Figure 20 Example 3.16: Guide tone resolution turnaround progression VI: iii – TT/VI – ii – TT/V

The sixth guide tone resolution is based on Guide tone table VI. When reading this guide tone resolution, one can start with the 5th degree of chord iii, which leads to the 5th degree of chord TT/VI, followed by the 5th degree of chord ii, then the 5th degree of chord V and than the 5th degree of chord I.

One could also start with the 9th degree of chord iii, then follows the 9th degree of chord TT/VI, the 9th degree of chord ii, the 9th degree of chord V and the 9th degree of chord I. Similarly one could also start with the 7th or the 3rd degree of chord iii.

Example 3.17: Guide tone table turnaround progression VI: iii – TT/VI – ii – TT/V

iii	TT/VI	ii	TT/V	I
3	3	3	3	3
5	5	5	5	5
7	7	7	7	7
9	9	9	9	9

Figure 21 Example 3.17: Guide tone table turnaround progression VI: iii – TT/VI – ii – TT/V

3.2.7 Turnaround progression VII: III – TT/VI – II – TT/V

Example 3.18: Guide tone resolution turnaround progression VII: III – TT/VI – II – TT/V

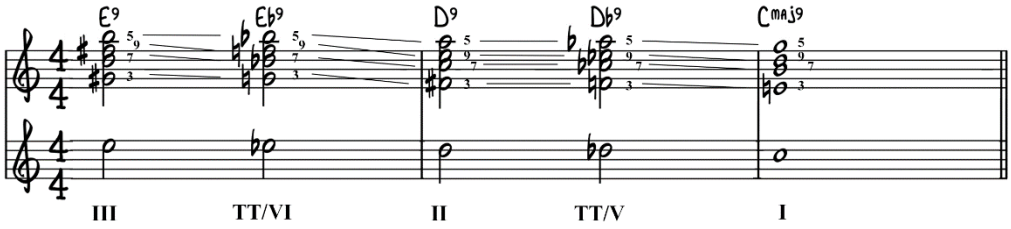

Figure 22 Example 3.18: Guide tone resolution turnaround progression VII: III – TT/VI – II – TT/V

The seventh guide tone resolution is based on Guide tone table VI. When reading this guide tone resolution, one can start with the 5th degree of chord III, which leads to the 5th degree of chord TT/VI, followed by the 5th degree of chord II, then the 5th degree of chord TT/V and than the 5th degree of chord I.

One could also start with the 9th degree of chord III, then follows the 9th degree of chord TT/VI, the 9th degree of chord II, the 9th degree of chord TT/V and

the 9th degree of chord I. Similarly one could also start with the 7th or the 3rd degree of chord III.

3.2.8 Turnaround Progression VIII: I – TT/VI – TT/ii – TT/V

Example 3.19: Guide tone resolution turnaround progression VIII: I – TT/VI – TT/ii – TT/V

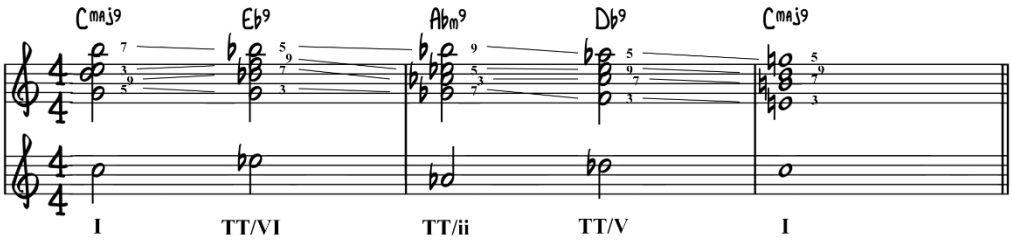

Figure 23 Example 3.19: Guide tone resolution turnaround progression VIII: I – TT/VI – TT/ii – TT/V

The eighth guide tone resolution is based on Guide tone table VIII. When reading this guide tone resolution, one can start with the 7th degree of chord I, which leads to the 5th degree of chord TT/VI, followed by the 9th degree of chord TT/ii, then the 5th degree of chord TT/V and the 5th degree of chord I. Next up are the 5th degree of chord I, the 3rd degree of chord TT/VI, the 7th degree of chord TT/ii, then the 3rd degree of chord TT/V and the 3rd degree of chord I. This then leads to the 3rd degree in chord I and so on.

Example 3.20: Guide tone table turnaround progression VIII: I – TT/VI – TT/ii –

I	TT/VI	TT/ii	TT/V	I
3	9	5	9	9
5	3	7	3	3
7	5	9	5	5
9	7	3	7	7

Figure 24 Example 3.20: Guide tone table turnaround progression VIII: I – TT/VI – TT/ii –

3.2.9 Turnaround Progression IX: TT/iii – TT/VI – TT/ii – TT/V

Example 3.21: Guide tone resolution turnaround progression IX: TT/iii – TT/VI – TT/ii – TT/V

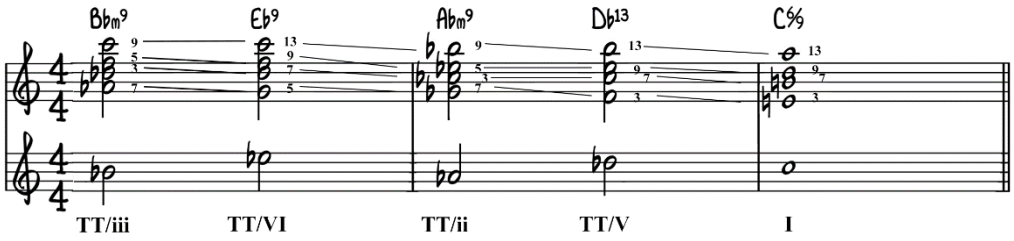

Figure 25 Example 3.21: Guide tone resolution turnaround progression IX: TT/iii – TT/VI – TT/ii – TT/V

The ninth guide tone resolution is based on Guide tone table IX. When reading this guide tone resolution, one can start with the 9th degree of chord TT/iii, which leads to the 13th degree of chord TT/VI, followed by the 9th degree of chord TT/ii, then the 13th degree of chord TT/V and the 13th degree of chord I.

One could also start with the 5th degree of chord TT/iii, than follows the 9th degree of chord TT/VI, the 5th degree of chord TT/ii, then the 9th degree of chord TT/V and the 9th degree of chord I. This then leads back to the 9th degree in chord I.

Other options would be to start with the 3rd or the 7th of chord TT/iii.

Example 3.22: Guide tone table turnaround progression IX: TT/iii – TT/VI – TT/ii – TT/V

TT/iii	TT/VI	TT/ii	TT/V	I
3	7	3	7	7
5	9	5	9	9
7	3	7	3	3
9	13	9	13	13

Figure 26 Example 3.22: Guide tone table turnaround progression IX: TT/iii – TT/VI – TT/ii – TT/V

3.2.10 Turnaround progression X: vi – II – TT/ii – TT/V

Example 3.23: Guide tone resolution turnaround progression X: vi – II – TT/ii – TT/V

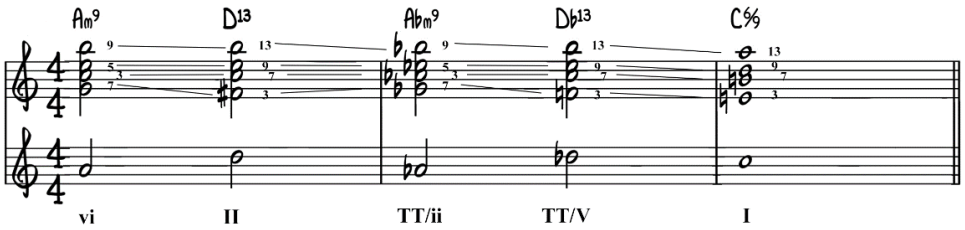

Figure 27 Example 3.23: Guide tone resolution turnaround progression X: vi – II – TT/ii – TT/V

The tenth guide tone resolution is based on guide tone table X. When reading this guide tone resolution, one can start with the 3rd degree of chord vi, which leads to the 7th degree of chord II, followed by the 3rd degree of chord TT/ii, then the 7th degree of chord TT/V and then the 7th degree of chord I. This would then lead to the 7th degree of chord vi and so on.

One could also start with the 5th degree of chord vi, then follows the 9th degree of chord II, the 5th degree of chord TT/ii, the 9th degree of chord TT/V and the 9th degree of chord I, followed by the 9th degree of chord vi and so on.

Example 3.24: Guide tone table turnaround progression X: vi – II – TT/ii – TT/V

vi	II	TT/ii	TT/V	I
3	7	3	7	7
5	9	5	9	9
7	3	7	3	3
9	13	9	13	13

Figure 28 Example 3.24: Guide tone table turnaround progression X: vi – II – TT/ii – TT/V

3.2.11 Turnaround Progression XI: I – VI – TT/ii – TT/V

Example 3.25: Guide tone resolution turnaround progression XI: I – VI – TT/ii – TT/V

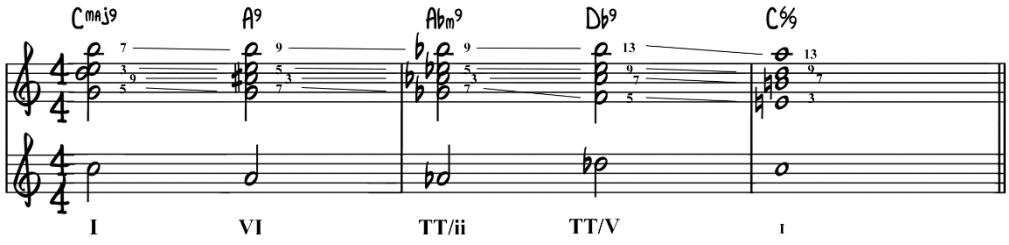

Figure 29 Example 3.25: Guide tone resolution turnaround progression XI: I – VI – TT/ii – TT/V

The eleventh guide tone resolution is based on Guide tone table XI.

When reading this guide tone resolution, one can start with the 5th degree of chord I, which leads to the 7th degree of chord VI, followed by the 7th degree of chord TT/ii, then the 5th degree of chord TT/V and the 3rd degree of chord I. Next up are

the 3rd degree of chord I, the 5th degree of chord VI, the 5th degree of chord TT/ii, then the 9th degree of chord TT/V and the 9th degree of chord I. This then leads to the 9th degree in chord I and so on.

Example 3.26: Guide tone table turnaround progression XI: I – VI – TT/ii – TT/V

I	VI	TT/ii	TT/V	I
3	5	5	9	9
5	7	7	3	3
7	9	9	13	13
9	3	3	7	7

Figure 30 Example 3.26: Guide tone table turnaround progression XI: I – VI – TT/ii – TT/V

3.2.12 Turnaround progression XII: iii – VI – TT/ii – TT/V

Example 3.27: Guide tone resolution turnaround progression XII: iii – VI – TT/ii – TT/V

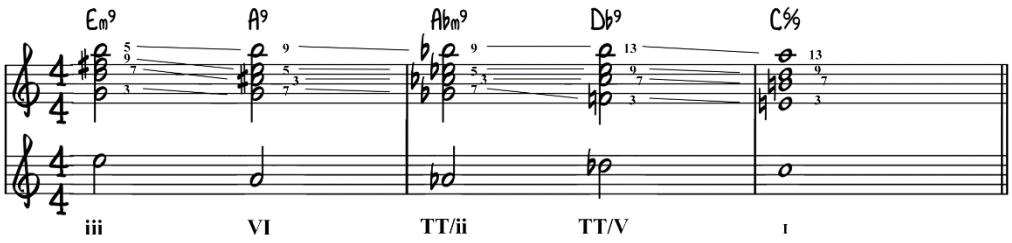

Figure 31 Example 3.27: Guide tone resolution turnaround progression XII: iii – VI – TT/ii – TT/V

The twelfth guide tone resolution is based on Guide tone table XII.

When reading this guide tone resolution, one can start with the 5th degree of chord iii, which leads to the 9th degree of chord VI, followed by the 9th degree of chord TT/ii, then the 13th degree of chord TT/V and then the 13th degree of chord I.

One could also start with the 9th degree of chord iii, then follows the 5th degree of chord VI, the 5th degree of chord TT/ii, the 9th degree of chord TT/V and the 9th degree of chord I. Similarly one could also start with the 7th or the 3rd degree of chord iii.

Example 3.28: Guide tone table turnaround progression XII: iii – VI – TT/ii – TT/V

iii	VI	TT/ii	TT/V	I
3	7	7	3	3
5	9	9	13	13
7	3	3	7	7
9	5	5	9	9

Figure 32 Example 3.28: Guide tone table turnaround progression XII: iii – VI – TT/ii – TT/V

3.2.13 Turnaround progression XIII: iii – TT/VI – TT/II – TT/V

Example 3.29: Guide tone resolution turnaround progression XIII: iii – TT/VI – TT/II – TT/V

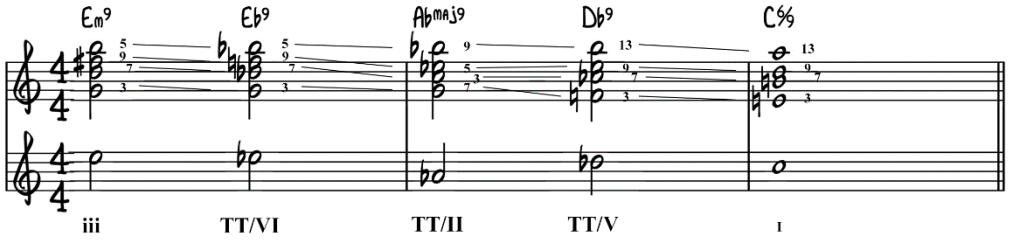

Figure 33 Example 3.29: Guide tone resolution turnaround progression XIII: iii – TT/VI – TT/II – TT/V

The thirteenth guide tone resolution is based on the Guide tone table XIII.

When reading this guide tone resolution, one can start with the 5th degree of chord iii, which leads to the 5th degree of chord TT/VI, followed by the 9th degree of chord TT/II, then the 13th degree of chord TT/V and then the 13th degree of chord I.

One could also start with the 9th degree of chord iii, then follows the 9th degree of chord TT/VI, the 5th degree of chord TT/II, the 9th degree of chord TT/V and the 9th degree of chord I. Similarly one could also start with the 7th or the 3rd degree of chord iii.

Example 3.30: Guide tone table turnaround progression XIII: iii – TT/VI – TT/II – TT/V

iii	TT/VI	TT/II	TT/V	I
3	3	7	3	3
5	5	9	13	13
7	7	3	7	7
9	9	9	9	9

Figure 34 Example 3.30: Guide tone table turnaround progression XIII: iii – TT/VI – TT/II – TT/V

3.2.14 Turnaround progression XIV: I – TT/VI – TT/II – TT/V

Example 3.31: Guide tone resolution turnaround progression XIV: I – TT/VI – TT/II – TT/V

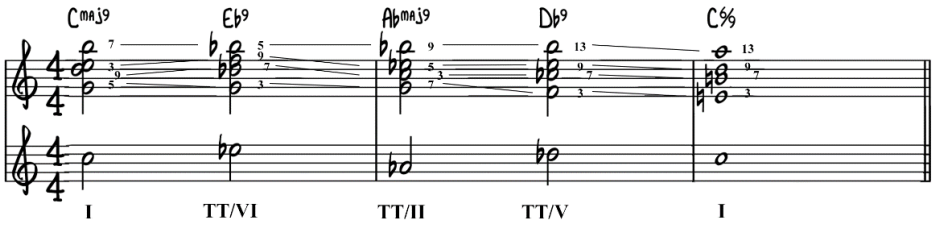

Figure 35 Example 3.31: Guide tone resolution turnaround progression XIV: I – TT/VI – TT/II – TT/V

The fourteenth guide tone resolution is based on the Guide tone table XIV.

When reading this guide tone resolution, one can start with the 5th degree of chord I, which leads to the 3rd degree of chord TT/VI, followed by the 7th degree of chord TT/II, then the 3rd degree of chord TT/V and the 3rd degree of chord I. Next up are the 3rd degree of chord I, the 9th degree of chord TT/VI, the 5th degree of chord

TT/II, then the 9th degree of chord TT/V and the 9th degree of chord I. This then leads to the 9th degree in chord I and so on.

Example 3.32: Guide tone table turnaround progression XIV: I – TT/VI – TT/II – TT/V

I	TT/VI	TT/II	TT/V	I
3	9	5	9	9
5	3	7	3	3
7	5	9	13	13
9	7	3	7	7

Figure 36 Example 3.32: Guide tone table turnaround progression XIV: I – TT/VI – TT/II – TT/V

3.2.15 Turnaround Progression XV: I – V/bVI – bVI – V/III – III – V – I (Coltrane Change Turnaround)

"John Coltrane developed this progression as an adaptation to the Miles Davis tune "Tune Up" Coltrane explored the formula in composition such as Giant Steps and Countdown. They can be applied in most circumstances where there are four bars of a major chord or a four bar ii-V-I especially during improvised solos. The progression also works well as a turnaround.''[18]

[18] ibid.

Example 3.33 Coltrane Change turnaround

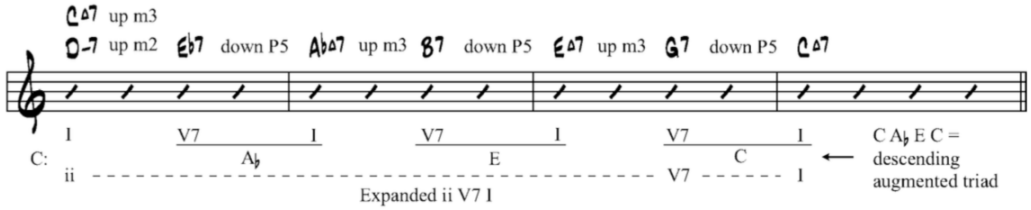

Figure 37 Example 3.33 Coltrane Change turnaround

Example 3.34: Guide tone resolution turnaround progression XV: I – V/bVI – bVI – V/III – III – V – I

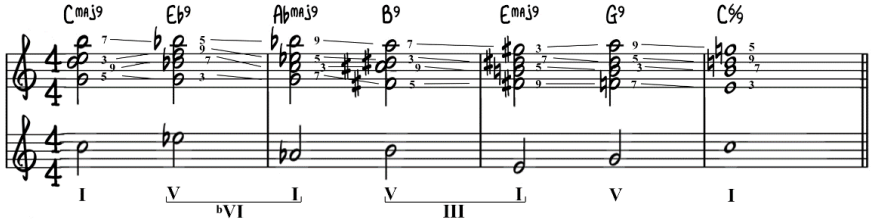

Figure 38 Example 3.34: Guide tone resolution turnaround progression XV: I – V/bVI – bVI – V/III – III – V – I

The fifteenth guide tone resolution is based on Guide tone table XV.

When reading this guide tone resolution, one can start with the 3rd degree of chord I, which leads to the 9th degree of chord V, followed by the 5th degree of chord I, then the 3rd degree of chord V, the 7th degree of chord I, the 5th degree of chord V and the 9th degree of chord I. Next up are the 9th degree of chord I, the 7th degree of chord V, the 3rd degree of chord I, the 9th degree of chord V, the 5th degree of chord I, the 3rd degree of chord V and the 7th degree of chord I. This then leads to the 7th degree in chord I and so on.

Example 3.35: Guide tone table turnaround progression XV: I – V/bVI – bVI – V/III – III – V – I

I	V/^{b}VI	^{b}VI	V/III	III	V	I
3	9	5	3	7	5	9
5	3	7	5	9	7	3
7	5	9	7	3	9	5
9	7	3	9	5	3	7

Figure 39 Example 3.35: Guide tone table turnaround progression XV: I – V/bVI – bVI – V/III – III – V – I

In this chapter some guide tone tables for the creation of voice leading exercises have been shown. They represent some possibilities for guide tones to relate to one another in a guide tone resolution.

As mentioned in the previous chapter, practicing voice leading should be started by singing alongside a piano in order to train the ear, but from there one can move on to practice with other instruments.

The following chapter will show some of the exercises that can be created from the material above.

4

Exercises

These improvisation lines were created based on the material in chapter 3. These serve as examples of possible improvisation lines; however, there are more lines that can be made using the tables in chapter 3. When creating a line, the guide tones should be as close together as possible for a smooth movement. Many are common tones, some are half steps and some are whole steps. The exercises below are based on chord tones from each chord to create a clear harmony. Some of them have passing notes from the scale degree.

As previously mentioned, the exercises were created with the saxophone, octave effect and loop pedal in mind, but they can easily be adjusted for a wide range of instruments.

Guide tone exercises

All of the exercises in this chapter are based on the tables from chapter 3. These are examples of possible improvisation lines that can be developed from the system explained above. They can be used within a practice routine with the loop pedal, an octave effect and the saxophone. As mentioned before, this system does not work exclusively with the saxophone. With some adjustments it can be useful for other instruments too.

The tables can also be used to create more improvisation lines based on personal preferences. The pertinent table numbers are mentioned alongside each exercises as a point of reference.

Example 4.1 turnaround progression exercise I: I – vi – ii – V

This exercise is based on the guide tone table from turnaround progression I – II, starting with the 5th degree in the first chord. The line used to create it is:

5 – 7 – 3 – 7 – 3

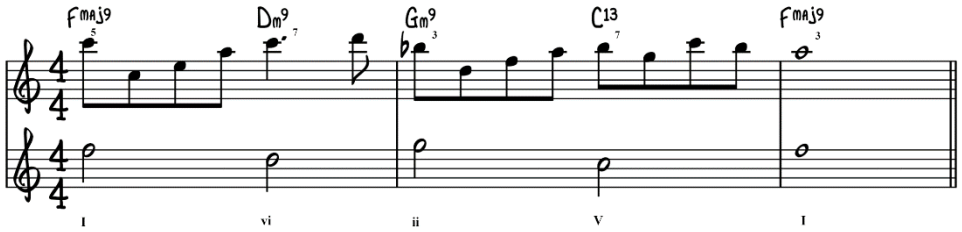

Figure 40

This exercise starts with the 5th and the 7th (C) of Fmaj9 and Dm9, then moves down to the 3rd and the 7th (Bb) of Gm9 and C13 and ends at the 3rd (A) of Fmaj9.

Example 4.2 turnaround progression exercise II: I – VI – ii – V

This exercise is based on the guide tone table from turnaround progression I – II, starting with the 9th degree in the first chord. The line used to create this exercise is:

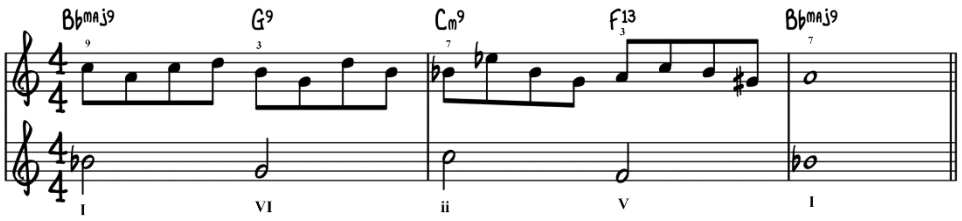

Figure 41

The exercise starts with the 9th (C) of Bbmaj9, than moves down to the 3rd (B) of G9, than the 7th (Bb) of Cm9 and further down to the 3rd and 7th (A) of F13 and Bbmaj9.

For the following progression, one can also create more tension in chord V.

Example 4.2.1 additional guide tone table

I	VI	ii	V	I
3	5	9	♭13	9
7	♭9	5	♭9	5

Figure 42

The line used in this example is:

7 – b9 – 5 – b9 – 5

Example 4.2.2 additional turnaround progression exercise: I – VI – ii – V

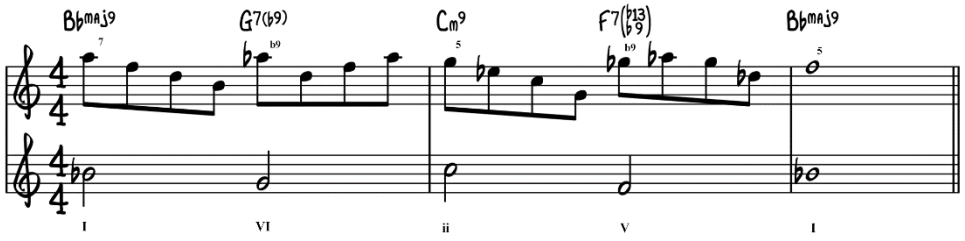

Figure 43

This exercise starts with 7th (D) of Bbmaj9, then moves down to b9 (Ab) of G7(b9), then the 5th (G) of Cm9 and further down to b9 (Gb) of F7b13b9 and ends at the 5th (F) of Bbmaj9.

Example 4.3 turnaround progression exercise III: iii – VI – ii – V

This exercise is based on the guide tone table from turnaround progression III, starting with the 7th degree in the first chord. The line used to create this exercise is:

7 – 3 – 7 – 3 – 7

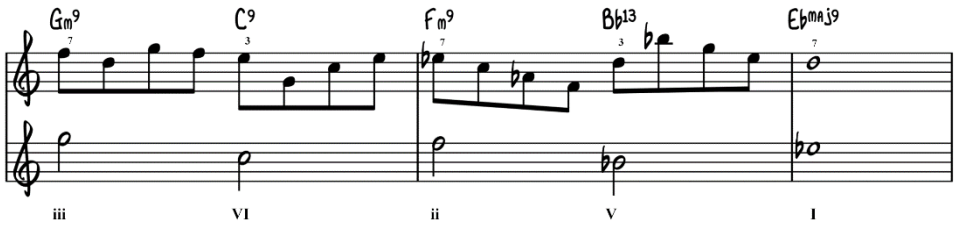

Figure 44

This progression starts at 7th (F) of Gm9, lead to the 3rd (E) of C9 and then 7th (Eb) of Fm9, then it moves down to 3rd (D) of Bb13. This is also a chromatic line, and then follows a common tone 7th (D) of Ebmaj9.

For the following progression, one can also create more tension in chord V.

Example 4.3.1 additional guide tone table

iii	VI	ii	V	I
5	b9	5	b9	5
9	b13	9	b13	9

Figure 45

The line used in this exercise is:

9 – b13 – 9 – b13 – 9

Example 4.3.2 additional turnaround progression exercise: iii – VI – ii – V

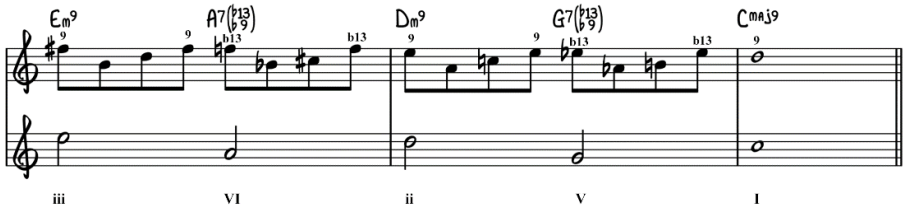

Figure 46

This progression starts with 9th (F#) of Em9 and moves down to b13 (F) of A7b9b13, followed by the 9th (E) of Dm9, going down to b13 (Eb) of G7b9b13 and lastly leads to 9th (D) of Cmaj9.

Example 4.4 turnaround progression exercise IV: III – VI – II – V

This exercise is based on the guide tone table from turnaround progression IV, starting with the 7th degree in the first chord. The line used to create this exercise is:

7 – 3 – 7 – 3 – 7

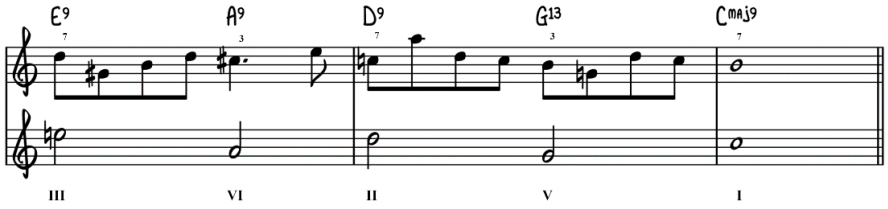

Figure 47

The improvisation line above starts with the 7th (D) of E9 and moves down to the 3rd (C#) of A9, followed by the 7th (C) of D9 and the 3rd (B) of G13 and lastly to the 7th (B) of Cmaj9.

Example 4.5 turnaround progression exercise V: I – TT/VI – ii – TT/V

This exercise is based on the guide tone table from turnaround progression V, starting with the 3rd degree in the first chord. The line used to create this exercise is:

3 – 9 – 9 – 9 – 9

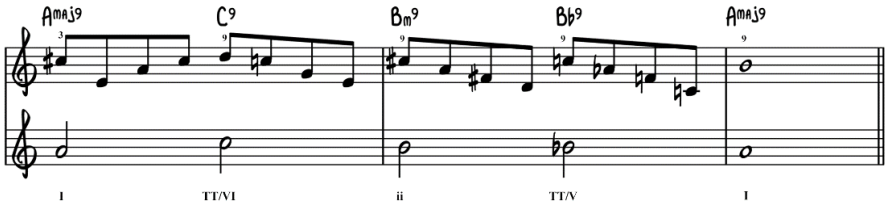

Figure 48

This exercise starts with the 3rd (C#) of Amaj9 and moves up to the 9th (D) of C9, then down again to the 9th (C#) of Bm9 and then to the 9th (C) of Bb9 and finishes with the 9th (B) of Amaj9.

Example 4.6 turnaround progression exercise VI: iii – TT/VI – ii – TT/V

This exercise is based on the guide tone table from turnaround progression VI, starting with the 9th degree in the first chord. The line used to create this exercise is:

9 – 9 – 9 – 9 – 9

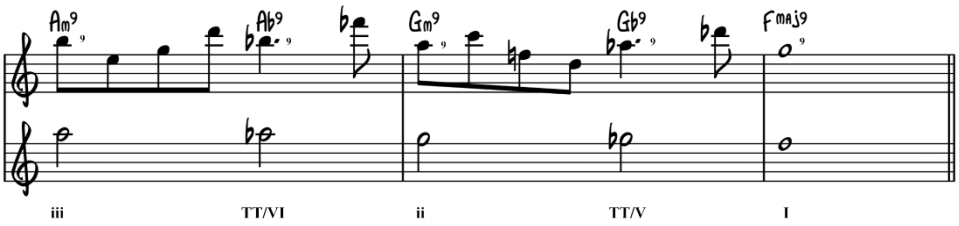

Figure 49

The exercise above starts with the 9th (B) of Am9 and continues with further 9th, each moving a half step down.

Example 4.7 turnaround progression exercise VII: III – TT/VI – II – TT/V

This exercise is based on the guide tone table from turnaround progression VI, starting with the 3rd degree in the first chord. The line used to create this exercise is:

3 – 3 – 3 – 3 – 3

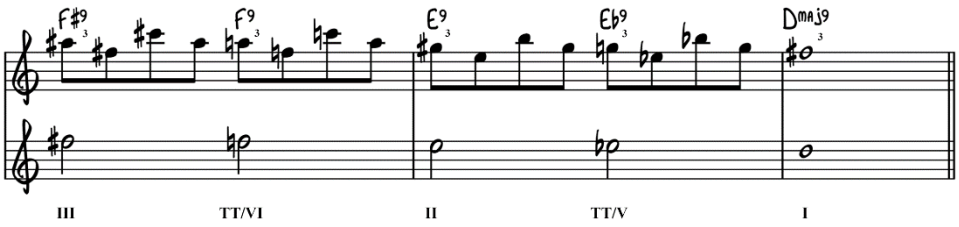

Figure 50

This exercise starts with the 3rd (A#) of F#9 and continues with further 3rd, each moving a half step down.

Example 4.8 turnaround progression exercise VIII: I – TT/VI – TT/ii – TT/V

This exercise is based on the guide tone table from turnaround progression VIII, starting with the 5th degree in the first chord. The line used to create this exercise is:

5 – 3 – 7 – 3 – 3

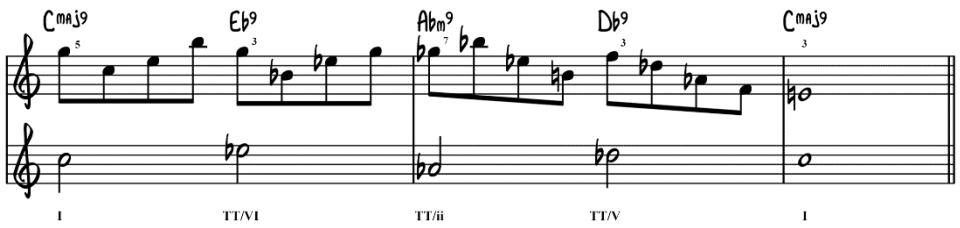

Figure 51

The exercise above starts with the 5th (G) of Cmaj9, which is the same as the 3rd (G) of Eb9 and then moves a half step down to the 7th (Gb) of Abm9, followed by the 3rd (F) of Db9 and finally moves down to the 3rd (E) of Cmaj9.

Example 4.9 turnaround progression exercise IX: TT/iii – TT/VI – TT/ii – TT/V

This exercise is based on the guide tone table from turnaround progression IX, starting with the 7th degree in the first chord. The line used to create this exercise is:

7 – 3 – 7 – 3 – 3

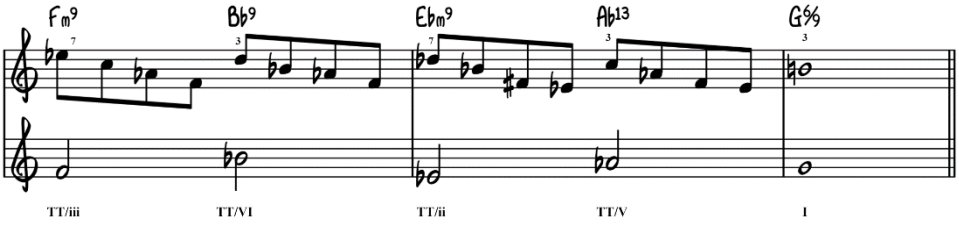

Figure 52

The exercise of example 4.9 starts at the 7th (Eb) of Fm9, then moves down a half step to the 3rd (D) of Bb9, then down to the 7th (Db) of Ebm9 and then further down to the 3rd (C) of Ab13 and ends at the 3rd (B) of G6/9.

Example 4.10 turnaround progression exercise X: vi – II – TT/ii – TT/V

This exercise is based on the guide tone table from turnaround progression X, starting with the 5th degree in the first chord. The line used to create this exercise is:

5 – 9 – 5 – 9 – 9

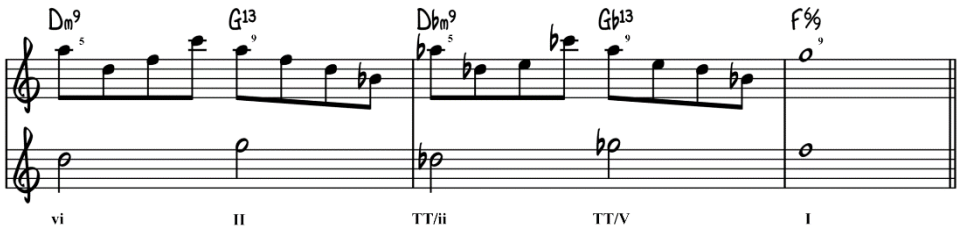

Figure 53

This exercise starts with the 5th (A) of Dm9, which is shared by the 9th of G13 and then moves a half step down to the 5th and the 9th (Ab) of Dbm9 and Gb13 and finishes with the 9th (G) of F6/9.

Example 4.11 turnaround progression exercise XI: I – VI – TT/ii – TT/V

This exercise is based on the guide tone table from turnaround progression XI, starting with the 7th degree in the first chord. The line used to create this exercise is:

7 – 9 – 9 – 13 – 13

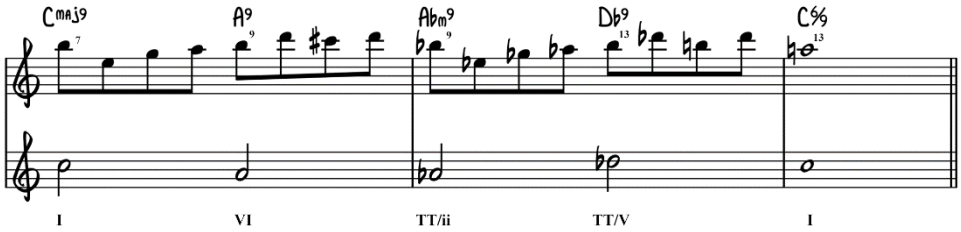

Figure 54

The exercise for example 4.11 start with the 7th and 9th (B) of Cmaj9 and A9, followed by a half step down to the 9th and the 13th (Bb) of Abm9 and Db9 and leads to the 13th (A) of C6/9.

Example 4.12 turnaround progression exercise XII: iii – VI – TT/ii – TT/V

This exercise is based on the guide tone table from turnaround progression XII, starting with the 3rd degree in the first chord. The line used to create this exercise is:

3 – 7 – 7 – 3 – 3

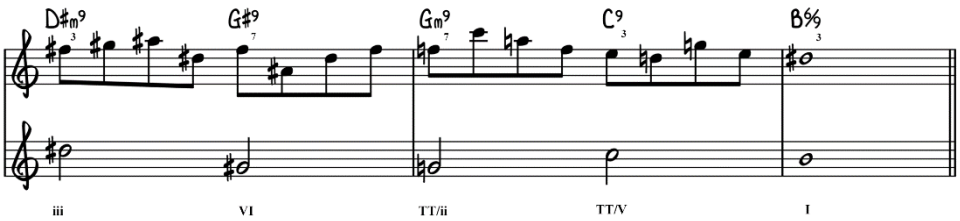

Figure 55

The exercise for example 4.12 starts with the 3rd and the 7th (F#) of D#m9 and G#9, which is followed by the 7th (F) of Gm9 and goes down to the 3rd (E) of C9 and finishes with the 3rd (D#) of B6/9.

Example 4.13 turnaround progression exercise XIII: iii – TT/VI – TT/II – TT/V

This exercise is based on the guide tone table from turnaround progression XIII, starting with the 7th degree in the first chord. The line used to create this exercise is:

7 – 7 – 3 – 7 – 7

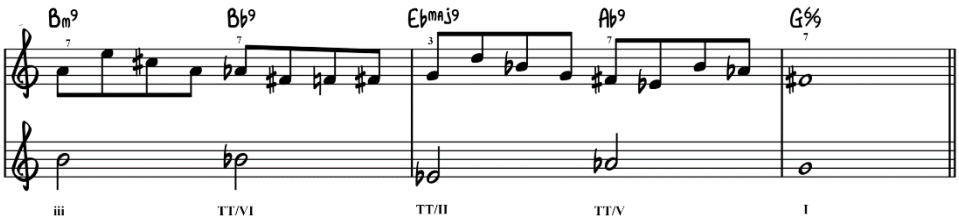

Figure 56

The exercise in this example starts at the 7th (A) of Bm9 and goes down a half step to the 7th (Ab) of Bb9, then further down to the 3rd (G) of Ebmaj9 and then the 7th (F#) of Ab9 and G6/9.

Example 4.14 turnaround progression exercise XIV: I – TT/VI – TT/II – TT/V

Tadd Dameron was the first to use this turnaround in his composition Lady Bird. Take note that the turnaround is played a few different variations. The original is Cmai7-Eb7-Abmaj7-Db7 or Cmaj7-Eb7-Ab7-Db7, Either one of these can be used.

This exercise is based on the guide tone table from turnaround progression XIV, starting with the 3rd degree in the first chord. The line used to create this exercise is:

3 – 9 – 5 – 9 – 9

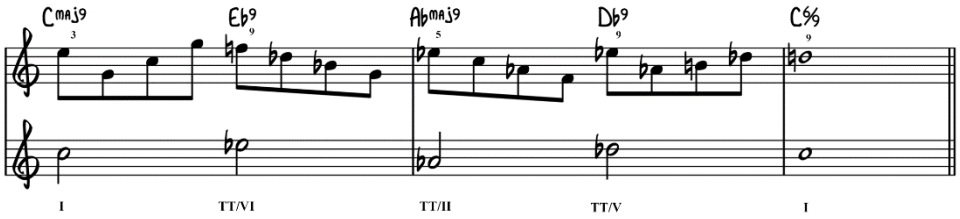

Figure 57

Example 4.15 turnaround progression exercise XV: I – V/bVI – bVI – V/III – III – V – I (Coltrane change)

This last exercise is based on the guide tone table from turnaround progression XV, starting with the 3rd degree in the first chord. The line used to create this exercise is:

3 – 9 – 5 – 3 – 7 – 5 – 9

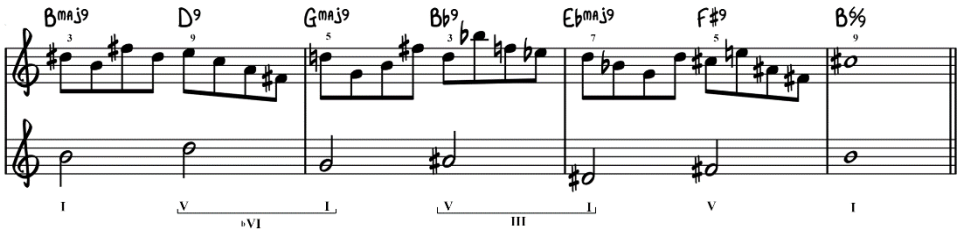

Figure 58

This exercise in the key of B starts with the 3rd (D#) of Bmaj9 moves up to the 9th (E) of D9, then down to the 5th, 3rd and 7th (D) of Gmaj9, Bb9 and Ebmaj9, then further down to the 5th (C#) of F#9 and finishes with the 9th (C#) of B6/9.

When reading the guide tone resolutions in chapter three movement between the chords was possible in small steps as well as in larger steps. The exercises in this chapter always use the smallest steps possible, such as common tones and half steps in order to create a smooth movement. Within jazz improvisation, the larger steps are also very common, but they are not very useful for voice leading practice, since the small steps are easier for the ear to catch.

5

Conclusion and Outlook

The practice routine of a jazz saxophonist is constantly evolving. What may have worked once may not work forever. It is crucial to stay open minded and to keep adjusting as needed. One must not become entrenched in a personal comfort zone.

This makes the advantages of the loop pedal even more apparent. Different to other available tools, the loop pedal is a blank canvas and one can transform it to fill almost any need.

The range of a saxophone is quite limited, but any implied problems can be avoided when it is used in combination with the loop pedal to create a bass line and an octave/pitch shifter effect is used to change it into a lower octave. Different types of effects can cause a struggle when used in combination with the saxophone, seeing as they are constructed for guitars. The two models, that have the least problems with this issue are the Boss OC-3 Super Octave and the Electro Harmonix POG pedal.

As technology continues to develop, it will lead to the loop pedal becoming even more intuitive and will open doors for a new generation of jazz musicians.

The practice of voice leading helps Jazz saxophonists to hear changes in chord progressions. This supports them in selecting a target note and creating an interesting connecting line. When one starts to practice voice leading and learning about target notes, one also continues to develop a good ear.

Practicing voice leading is not fancy or trendy but if one takes development as a jazz saxophonist seriously, its usefulness is undeniable.

Learning about the loop pedal and how its qualities could be used for practice really sparked my interest. That made me go considerably further from the first time I used the loop pedal as a background for practice with Chris Cheek. I explored its history, culture and functions and started to build backgrounds for my practice, while

also researching live looping and the ways other musicians have been using the loop pedal. It was also very helpful to use the loop pedal as a tool to teach improvisation, allowing the students to take turns building up the layers on the loop pedal.

This way to improvise is of course different from a real band setting, since only one person is improvising at a time, but I have seen how it has helped my students try out something new and build up their confidence when improvising. Another direction that I have researched is the tradition of looping, how different artists prepare for live looping sessions and construct and plan their shows.

Moving forward, it would be of great interest to see how the loop pedal can be paired with jazz and improvisation. Combining jazz improvisation as well as composition with the loop pedal could lead to an interesting and surprising blend. The loop pedal lends itself to be used for creating interesting textures and the layering of a tune. This is especially useful when using the loop pedal to compose.

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