

Jazz

A Beginner's Guide

ONEWORLD BEGINNER'S GUIDES combine an original, inventive, and engaging approach with expert analysis on subjects ranging from art and history to religion and politics, and everything in-between. Innovative and affordable, books in the series are perfect for anyone curious about the way the world works and the big ideas of our time.

aesthetics
africa
american politics
anarchism
ancient philosophy
animal behaviour
anthropology
anti-capitalism
aquinas
archaeology
art
artificial intelligence
the baha'i faith
the beat generation
the bible
biodiversity
bioterror & biowarfare
the brain
british politics
the Buddha
cancer
censorship
christianity
civil liberties
classical music
climate change
cloning
the cold war
conservation
crimes against humanity
criminal psychology
critical thinking
the crusades
daoism
democracy
descartes
dewey
dyslexia
economics
energy
engineering
the english civil wars
the enlightenment
epistemology
ethics
the european union
evolution
evolutionary psychology
existentialism
fair trade
feminism
forensic science
french literature
the french revolution
genetics
global terrorism
hinduism
history
the history of medicine
history of science
homer
humanism
huxley
international relations
iran
islamic philosophy
the islamic veil
journalism
judaism
justice
lacan
life in the universe
literary theory
machievelli
mafia & organized crime
magic
marx
medieval philosophy
the middle east
modern slavery
NATO
the new testament
nietzsche
nineteenth-century art
the northern ireland conflict
nutrition
oil
opera
the palestine-israeli conflict
parapsychology
particle physics
paul
philosophy
philosophy of mind
philosophy of religion
philosophy of science
planet earth
postmodernism
psychology
quantum physics
the qur'an
racism
rawls
reductionism
religion
renaissance art
the roman empire
the russian revolution
shakespeare
shi'i islam
the small arms trade
stalin
sufism
the torah
the united nations
the victorians
volcanoes
the world trade organization
war
world war II



Beginners
GUIDES

Jazz

A Beginner's Guide

Stuart Nicholson



A Oneworld Paperback Original

First published by Oneworld Publications, 2017

Copyright © Stuart Nicholson, 2017

The right of Stuart Nicholson to be identified as the Author of this work has been asserted by him in accordance with the Copyright, Designs and Patents Act 1988

All rights reserved

Copyright under Berne Convention

A CIP record for this title is available from the British Library

ISBN 978-1-78074-998-3

eISBN 978-1-78074-999-0

Typeset by Silicon Chips

Printed and bound in Great Britain by Clays Ltd, St Ives plc

Oneworld Publications
10 Bloomsbury Street
London, WC1B 3SR
England

Stay up to date with the latest books,
special offers, and exclusive content from
Oneworld with our monthly newsletter

Sign up on our website
www.oneworld-publications.com

To Dear Kath (and Gwladys)

Contents

	Introduction	1
1	Setting the Scene	7
2	The Blues	12
3	The American Popular Song	30
4	The Original Composition	46
5	The Instrumental Solo	54
6	From Forms to Styles	72
7	The Rise of the Big Bands	97
8	Jazz Goes Modern	131
9	Change – And More Change	167
10	The Postmodern Paradox	199
11	Jazz in the Global Village	226
	Acknowledgements	247
	Notes	249
	Index	267

Introduction

Somehow it's impossible to feel neutral about jazz. Love it or hate it, it always seems to provoke strong emotions. Depending on your point of view it can be downmarket or upmarket, monotonous or momentous, baffling or blatant and it's been that way since its emergence in the early years of the twentieth century. Its arrival couldn't have been better timed. Commercial radio was spreading across the United States and would bring jazz into the homes of millions, while the sales of recorded music were taking off in a big way, not just in America but around the world. As soon as a recording came out in the United States, the rest of the world got to hear it within weeks. As cultural historian Donald Sassoon has pointed out, 'The spread of jazz ... in the 1920s was the first great trend in music history to occur mainly through recording.'¹ Today, practically every country in the world boasts an active jazz scene and international jazz stars are now just as likely to come from outside America as they are from inside it. Walt Whitman once wrote of each voice 'singing what belongs to him or her and none else',² and today the jazz world is singing in just such a way, creating a rich and diverse music that speaks of its continuing vibrancy into the twenty-first century.

Jazz: A Beginner's Guide is a step-by-step guide to help you get the most out of listening to this remarkable music. It has its roots in a course I was invited to give some years ago at a college of further education. It was an experience I greatly valued and the students' responses, observations and suggestions – plus the notes and modifications I made as the course progressed – have coloured my thinking on what follows. The first thing that

2 Jazz: A Beginner's Guide

I quickly learned that when we hear a new piece of music for the first time we subconsciously compare it with what we know so as to form an opinion about it, but if we've not heard anything like it before then we're not certain what to think. So when I played the students tracks jazz aficionados fondly imagine will make believers out of non-believers I was greeted with looks of polite bewilderment, since their previous listening experiences had not encompassed the kind of music they were now hearing. Clearly a more cautious musical approach was needed, and I soon came up with a selection of tracks that they found interesting and engaging, and by the end of the first semester I was more than pleasantly surprised by how quickly they had embraced jazz, formed their own musical preferences and were talking about their favourite recordings like experts!

Although there is no magic switch to 'instantly' improve our understanding of music with which we are unfamiliar, we do know our ability to understand music has been subconsciously developing below our threshold of conscious perception throughout our lifetime, beginning in our mother's womb. By the sixth month of pregnancy an *in utero* baby becomes aware of auditory stimulation and it appears that after twenty-eight weeks the majority of fetuses can detect frequency changes in the range of 250Hz.³ One experiment involved playing a piano melody to twenty-five women twice daily during their final weeks of pregnancy. A separate control group of twenty-five pregnant women were not exposed to the piano melodies. Six weeks after birth, the same melodies were played to all fifty babies. While the melody had a relaxing effect on all of them, the effect was twice as relaxing to the twenty-five who had had the melody played to them *in utero*.⁴

Music researchers tell us that our early listening habits are influenced by osmosis, or the gradual and unconscious assimilation of the music we're surrounded with as we grow up. By our early teenage years, we are surprisingly sure about music that

conforms to our taste expectations and are equally sure about music that does not. You might think that these musical preferences are set in stone, but they're not. Of course, whether we decide to broaden our musical taste as we get older is an entirely personal decision, but modern research tells us that our auditory, cognitive and motor functions are well able to undertake this through active listening, when 'parts of the brain that evolved for other purposes such as language, skill learning and auditory analysis are gradually co-opted into doing something new'.⁵ Emmanuel Bigand is just one of many psychologists to discover that humans are more skilled in understanding music than was previously thought, even those without any musical training. After conducting many experiments in the area of music cognition he discovered the reactions of musicians and non-musicians were closer than anybody had ever anticipated.⁶ One of his early experiments⁷ was how listeners interpreted complex pieces, and he discovered that while the response of trained musicians was along expected lines, untrained listeners intuitively, albeit less precisely, reached more or less the same conclusions and were nearly as good as trained listeners. While they were not able to explain any musical processes involved, they were nevertheless able to make pretty good sense of what was going on. Bigand conducted dozens more experiments looking at various aspects of music and a similar pattern emerged: experts were better than non-experts, but the non-experts were a lot better than might reasonably have been expected. Although there are clearly differences between trained and untrained listeners, Bigand concluded the gap was narrowed between the two groups because 'the human brain is already intensively trained to music through everyday life experience'.⁸ So, whatever misgivings you might be harbouring about getting into jazz – 'you need a music degree to understand what's going on,' or 'it's a difficult listen' – then you can comfortably forget about them, as you're actually better equipped to get into jazz than you thought.

4 Jazz: A Beginner's Guide

Throughout this book I've been very conscious of how the digitization of recorded sound has created a cultural landscape quite unlike anything in the past, or even the near past. Today, the immediacy of the Internet and the portability and sophistication of laptops, tablets, iPods and 4G smartphones means we're all able to engage with computer games, social networking sites, movies or music at any time of the day or night. And when it comes to music, chances are many of us listen to it on the go. It's a trend that shows no sign of slowing with sales of mobile MP3 players growing exponentially year by year,⁹ yet most people would probably be surprised – offended even – to learn that when consuming music in this way 'the act of listening' ceases to be 'exclusive' and the prime focus of their attention, but instead becomes 'inclusive' as we interact with reality around us.

For many, music today is overheard rather than listened to – a way of avoiding the silence of the daily commute, the daily jog or doing the housework, functioning as 'a form of "sonic wallpaper" that [provides] an undemanding backdrop to some other task'.¹⁰ This is known as 'secondary listening' and it's changing the nature of musical experience and the value we now attach to it. In their study 'Uses of Music in Everyday Life', Adrian North and his colleagues wrote that this reflected 'a rather passive attitude to music, which perhaps indicates how the increased availability of music has ... led to a reduction in the value placed on it by listeners',¹¹ concluding that our relationship to music in the digital age 'is not necessarily characterised by deep emotional investment'.¹² One example of this is reflected in our impatience with the album experience of ten or twelve songs sequenced to tell a particular story or sustain a certain mood¹³ which has given way to the quick musical fix of cherry-picking the album's hit songs since, as industry commentator Bob Lefsetz wrote, 'No one's got the time to sit and hear your hour plus statement.'¹⁴ Yet music demands emotional investment to realise its potential, so if we

become more aware of the benefits of listening well and knowing *why* this is worth achieving, we'll be taking a vital step towards getting more out of our listening experiences.

We all come to music with a certain amount of baggage – what we prefer to listen to, how we like to listen to it, when we like to listen to it, where we like to listen to it and what we expect of it. Clearly there isn't a 'correct' way to listen and engage with music because it's such a subjective and personal experience. Everybody's different, but there seems no virtue in assuming the relativist position that everyone's way of listening to music is equally valid, because if all perspectives have equal validity then a limitless plurality of values is indistinguishable from no values at all. This may mean acknowledging some music is not intended for, or indeed suited to, secondary listening and demands active or engaged, rather than passive, listening. Don't forget, a perpetual background of music to which little serious attention is paid can have the effect of actually diminishing the listening experience, so the more you put into listening to jazz when it's the sole focus of your attention, the quicker you're likely to get into it.

As we listen, certain musical characteristics are subconsciously stored in our long-term memory as schema – think of them as 'templates' of previous listening experiences. The more a piece of music conforms to the templates of music we've previously enjoyed, the more we're inclined to like it and correspondingly, the more a performance conforms to templates of music we haven't liked, then the more we're likely to give it a miss. As the cognitive psychologist and neuroscientist Daniel Levitin has pointed out, 'Our ability to make sense of music depends on experience, and on neural structures that can learn and modify themselves with each new song we hear, and with each new listening to a new song.'¹⁵

Encountering a new piece of music is analogous to meeting a new colleague at work; in both instances increased familiarity often brings greater understanding; for example, 'X is a much

6 Jazz: A Beginner's Guide

nicer and more interesting person than I first thought'. The key, of course, is taking the time and trouble to get to know someone; indeed, studies by Jay Dowling and his colleagues¹⁶ demonstrate how our memory for music develops over time – initially we get an overall picture of the song and with more exposure, more and more details are subconsciously filled in on our musical template. Sometimes it takes a while to build a good musical memory of a piece, but once it's done it can be strong and long-lasting. The key factor here is that with repetition comes familiarity. It's perhaps no coincidence that in sport, business, religion and philosophical disciplines, goals are often achieved by repetitive affirmation.

Yet whatever realm of music we choose to listen to, there will be certain performances we simply don't get, even after repeated listening. We shouldn't be put off by this; it's making the effort that counts, because quite often a strange thing happens. That same piece of music you were trying to make sense of can come back and bite you a few months, or even a few years, later. Sometimes a chance encounter – via the radio, TV, at a party, in a wine bar or any number of social settings – suddenly makes perfect sense in a way that it had not in the past. When this happens it can be a pretty powerful experience and is often explained by the slow but sure process of broadening your listening experiences – as you expand your musical memory with more and more templates, what seemed like a formidable challenge a month, six months or a year ago suddenly becomes today's essential listening.

All this, of course, requires a bit of patience, time and effort that involves the old-fashioned notion of delayed gratification, which is setting longer-term, rather than short-term, goals to produce rewards. This may sound a bit much in the consumerist age of instant gratification, but how many times do you fall in love at first sight? Once in a lifetime? Usually the deepest relationships are forged over time and take a bit of effort, and it's just the same with jazz.

1

Setting the Scene

What does Jazz Actually Mean?

Although jazz has been around for over a hundred years it's never been satisfactorily defined, posing the inevitable question: 'Well if you can't define it, how do you know it's jazz?' This curious paradox dates back to the music's origins when, in early 1917, a group of five young musicians from New Orleans calling themselves The Original Dixieland Jazz Band recorded 'Livery Stable Blues' for the Victor Talking Machine Company, which quickly became one of its earliest million-selling recordings. Compared with other popular musical styles, jazz sounded brash, loud and abrasive, yet there was widespread interest and curiosity in this new, unruly music, its uptempo abandon coinciding with a craze for social dancing that took off immediately following the industrialized death and destruction of World War I. As R.W. S. Mendl later wrote, 'Jazz is the product of a restless age; an age in which the fever of war is only now beginning to abate its fury; when men and women, after their efforts in the great struggle, are still too much disturbed to be content with a tranquil existence.'¹⁷

For a traumatized generation of young people who had survived the conflict and wanted to forget the past and ignore the future, jazz was more than a musical style: it was the style

8 Jazz: A Beginner's Guide

of the times. This was the so-called 'Jazz Age' of novelist F. Scott Fitzgerald, whose *Tales of the Jazz Age*, a collection of eleven short stories published in 1922, gave its name to an era. Jazz music quickly became associated with youth, energy and a revolt against convention. For those with money in their pockets wanting to shake up the stifling social conventions of the time, the intersection of alcohol, jazz and dance had a liberating and dizzyingly dangerous aura.

Today Scott Fitzgerald is regarded as one of the greatest American writers of the twentieth century, but when he paused in 1931, after a decade of booze and partying that had only been cut short by the stock market crash of 1929, to reflect on the origins of the Jazz Age he explained that jazz music, 'first meant sex, then dancing, then music'.¹⁸ By then, the word jazz had passed into common usage as an all-purpose adjective that was applied to almost anything from clashing colours to clothing with loud patterns. But jazz music was something else – 'to jazz' was to dance in a frenzied fashion, while to 'jazz something up' meant to give it a bit of pep and energy.

Almost a hundred years later, the word jazz invokes equally vague connotations. For most, jazz is music we take to be jazz, and although it has acquired the requisite gravitas due an important musical genre, in practice it's an umbrella term covering a multitude of subgenres, any one of which might represent jazz in the public's mind, which is why this book is content to go along with an open definition of jazz.

However, things are not quite such plain sailing in the land of its birth, the United States, where there's a more rigid understanding of what jazz should be. In the 1980s, a line of reasoning was adopted by some that for jazz to be 'jazz', it must possess certain elements that were present when jazz was a social and cultural expression of urban black America between the turn of the twentieth century and the 1950s. It was a period when swing and a feeling for the blues were central to the music's

expressionism, and these elements were retrospectively claimed as benchmarks to define what jazz was. However, the very act of defining jazz in terms of what it used to be had the effect of narrowcasting the music and setting in train a perception among the American people that jazz was now more about the past than the present. ‘The real jazz’ was deemed to be music that touched base with the jazz from its Golden Years, and more experimental forms of the music were not considered by some to be jazz at all.

This prescriptivist view of jazz overlooked the radical processes of evolution which jazz had undergone in both a national and global context, and does not appear to acknowledge how any art form inevitably grows beyond its roots and as it does so evolves and changes. Today, for example, opera is making considerable inroads in China, a development composer and musicologist Howard Goodall reminds us ‘is likely to have an impact on opera itself within a generation or two. Each culture that has embraced it has played a part in its development and mutation.’¹⁹ No art form, not even opera – or jazz – remains pure when it goes out into the world and rubs up against the conventions of other cultures.

Thus many people might raise their eyebrows that in an age of globalization, the Internet, 4G mobile telecommunications technology and cheap air travel, some American jazz academics, ideologues and assorted camp followers argue that for jazz to be jazz it must reflect a specific Afro-American identity. This may have something to do with what Milan Kundera called ‘the parochialism of large nations’, meaning they do not look beyond their borders since all their perceived needs can be found within them, so making them surprisingly naive about what is happening in the rest of the world.²⁰ Outside the United States jazz has taken on a life of its own, where, after a century of assimilation and emulation, a reconceptualization of the music has occurred, often with ‘local’ musicians developing ways of playing jazz that do not necessarily conform to the way jazz is played in America. This has

tended to happen at a local level where American jazz has been reinterpreted, recast and transformed as part of a local cultural repertoire in a way that gives it meaning and relevance to its local community. This is hardly unique to jazz. In the world of classical music, for example, the interface between the global and the local was highlighted by a performance of the São Paulo Symphony Orchestra during London's Henry Wood concert season of 2016, the *Daily Telegraph* noting, '[They] want to be taken seriously on the international stage, which means playing the core classics to a high standard, yet to ignore their own music would be perverse ... so the São Paulo honoured both.'²¹ So Kabbalah, by the Brazilian composer Marlos Nobre was a combination of the global, western classical music, and the local, 'Brazilian percussion.' Similarly, it would be equally perverse if Brazilian jazz musicians wanted their music to sound like the product of urban Black America when they have the whole rich musical heritage of their own country to draw upon by adding elements from the samba, the bossa nova and other Brazilian rhythms into the jazz mix. Today, if we only listened to American jazz we would certainly be impoverished, yet the joy of listening to Brazilian jazz is just one example of the richness and diversity to be found in the global jazz scene. Clearly, then, jazz is many things to many people. It is, after all, an art form still in flux, still growing and developing with all the twists and surprising turns this implies, and at this point in the twenty-first century it has become a bewilderingly pluralistic music.

Using Playlists

Clearly it would take something of a Luddite – a term describing those opposed to, or slow to adopt, change in their lifestyle – to ignore the changes in how we now consume recorded music in a book such as this. So from now on, each chapter is followed by a recommended playlist and a song-by-song listening guide that's

something akin to the old album liner notes of years ago. The idea is that you have the detailed overview of the subject at hand in the body of the chapter and a more informal discussion of the music that relates to it in the listening guide. Each playlist can be easily sourced and downloaded from the Internet and either stored on your iPod or on Compact Disc. I should stress that they are not intended to be condensed ‘histories of jazz’ or, in the case of the next chapter, a condensed ‘history of the blues’. Equally, these playlists are not intended in aggregate to represent the ‘best 250’ or so jazz recordings and nor should they be construed as such. They are simply a means of illustrating each chapter in as interesting a way as possible. The whole idea is to try and avoid what is known in radio and television as the ‘tune-out factor’ by including tracks that are likely to put the listener off – jazz is, after all, something to be enjoyed rather than endured. Try and stay with the playlist for each chapter for as long as you can before moving on to build up your templates of listening experiences – with jazz it really is a case of familiarity breeding content.

2

The Blues

Recognizing the Structure

The vast majority of compositions, or songs, used in jazz have an underlying structure known as a song form which is always adhered to when the song is performed. These song forms, which vary from composition to composition, can be broken down into three broad categories – the blues, the American Popular Song (or Standard) and the original composition. Free jazz is less concerned with fixed forms, often favouring different organizing principles which we won't concern ourselves with at this point. Recognizing a song form and knowing a bit about how they work is a very useful aid in understanding jazz, so in the next couple of chapters we're going to look at each of the three categories, since together they cover a vast swathe of recorded jazz, and then in Chapter 4 we'll see how this information can be used to get more out of listening to an improvised jazz solo.

You can Hear an Awful Lot Just by Listening

When we listen to music, our ears are drawn naturally towards the melody, or the words and melody if it's a vocal performance. Some people think of the melody in 'horizontal' terms, meaning

the twists and turns it takes as it seems to unfurl from left to right, or across the horizon. Underneath is the harmony, which is often thought of as ‘vertical’. These are blocks of notes piled one on top of another that, when sounded together, is called a chord. A succession of chords is called a chord sequence – sometimes called a chord progression, chord changes or simply the ‘changes’ – and whether these changes are simple or complex, they nevertheless give a song its sense of direction.

The chord sequence, then, is what’s going on beneath the melody of a song. One complete playing of a song’s chord sequence is known as a chorus and with every subsequent chorus, the sequence of chords is retained in precisely the same order no matter how long the song lasts. A song form, or ‘the form of a song’ or simply ‘the form’ is just a term for a container that preserves a particular sequence of chords in a particular order. For example, every time you open the container labelled ‘The Batman Theme’ – which incidentally is a 12-bar blues – you’ll find the same sequence of chords that are played in exactly the same way every time the tune is played. As the American jazz pianist Uri Cane observed, ‘I would say that for a lot of people, when they hear jazz, they’re not really hearing what the underlying structure is. Especially if they’re used to hearing songs in forms which are much more simple [than jazz]. They hear someone playing for 30 minutes and think, “What’s going on here?” But once you understand the underlying principle of what’s going on ... then you start to hear what’s going on.’²² What Cane is referring to is the underlying chord sequence, and once you’ve heard a song a few times and can hum or whistle along with it and know what’s coming next, you have already grasped something of its structure or form. It’s that easy.

The Blues Form

Chances are you will have heard the blues a million times before you bought this book, since they are just as much a

staple of rock and pop as they are of jazz – if you've heard the Elvis Presley single 'Hound Dog', Chuck Berry's 'Johnny B. Goode', Little Richard's 'Tutti Frutti', The Rolling Stones' 'Little Red Rooster', Tracy Chapman's 'Give Me One Reason', ZZ Top's 'Tush', Eric Clapton's 'Sweet Home Chicago' or James Brown's 'I Got You (I Feel So Good)', then you'll have heard a 12-bar blues. What this chapter does is look at how jazz musicians make use of the idiom. This is better understood when you're listening to the music. Each time you tap your foot to the rhythm, it's a beat. Four beats equals a bar. In their most typical form the blues lasts for 12 bars and if you were to count those 12 bars it would be: **1-2-3-4**, **2-2-3-4**, **3-2-3-4**, **4-2-3-4** and so on until **12-2-3-4**, when the twelfth bar is reached and the whole sequence is repeated over and over until the end of the performance. Our brains tend to make sense out of the blues by 'hearing' them as 3 lots of 4 bars – but you need the music playing to hear what I mean. Here the blues lyrics help – a phrase of 4 bars is followed by a similar phrase of 4 bars and then resolved by a third 4-bar phrase. By listening to the lyrics in conjunction with the chord changes, you get a better sense of these 4-bar units. Go to the playlist that follows, and the first song by Elmore James. Keep listening to the lyrics until you can sing along with them. Note how each word is placed in relation to the blues changes being played on his guitar. Now sing the lyrics below – 'The Beginner's Guide Blues'²³— in the style you've picked up from Elmore James. Then play the 'The Sun Is Shining' and when Elmore James starts singing, sing 'The Beginner's Guide Blues' lyrics in the style of Elmore James *over* his vocal. You'll soon get the hang of it, and once you do, you'll realize that what sounds easy isn't quite as easy as you might have first thought, and on top of that you'll have deepened your understanding of the blues form in a way that will last you a lifetime.

Readin' a Beginner's Guide, gotta chapter on the blues
 1 - 2 - 3 - 4, 2 - 2 - 3 - 4, 3 - 2 - 3 - 4, 4 - 2 - 3 - 4 (4 bars)
 Readin' a Beginner's Guide, I said it's got a chapter
 on the blues
 5 - 2 - 3 - 4, 6 - 2 - 3 - 4, 7 - 2 - 3 - 4, 8 - 2 - 3 - 4 (4 bars)
 Jus' gimme one more hour' an, I'll be an expert on the
 news (pronounce: nooze)
 9 - 2 - 3 - 4, 10 - 2 - 3 - 4, 11 - 2 - 3 - 4, 12 - 2 - 3 -
 4 (4 bars)

Counting the number of bars as they go by during a performance is a simple skill that's easy to master and is a valuable tool to help you understand the more complicated forms that are outlined in the next chapter. Somehow we're all hardwired to understand the blues; it's both a simple and a profound idiom and is better heard than written about. The relatively short cycle of 12 bars means you hear the blues chord changes several times during one performance, so you soon become very familiar with the blues form. On an instrumental blues like 'Chitlins Con Carne' by Kenny Burrell,²⁴ which is well worth downloading, the first beat of each 12-bar cycle is 'marked' by the drummer on the 'One' of the 1-2-3-4 sequence that starts the 12-bar cycle. This is a useful aid to keeping your bearings during the performance.

As a listener, it's worth spending time with the blues playlist until you're familiar with where the chords change in real time, since hearing and feeling the blues changes is an important step towards understanding form. It also provides a valuable means of hearing how a solo relates to the chord sequence underneath it and you will also begin to get a sense of the soloist's expressive coherence within the form since he or she has a certain number of notes that fit each given chord at any given moment. The trick is to juxtapose the notes that fit each chord to maximum