

Poldi Zeitlin David Goldberger

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Understanding Music Theory

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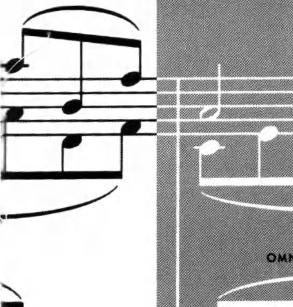
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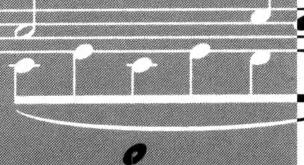
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Each lesson is backed up with a work sheet

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ANSWERS

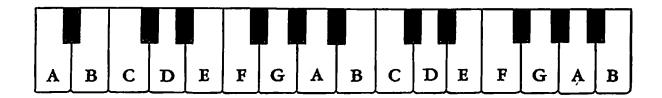
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PART ONE

LESSON 1 THE MUSICAL ALPHABET AND THE KEYBOARD

There are just seven letters in the musical alphabet: A B C D E F G. Can you say them backwards?

The lowest key on the left of the Piano Keyboard is A. After that, the white keys are named B C D E F and G. Then we start again with A.



The white keys touch each other, but the black keys are arranged in groups of twos and threes. Find all the groups of two black keys. Next find all the groups of three black keys. Can you do this without looking? The white key between the two black keys is D. How many D's can you find?



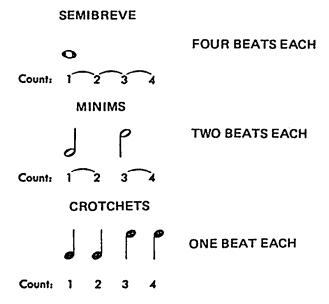
What is the name of the key to the left of D? The key to the right? Play all the C D E's. G and A are the white keys between the three black keys. Play all the G A's on your piano.



What is the name of the key to the left of G? The one to the right of A? Play all the FGAB's. You know the names of all the white keys on the piano.

LESSON 2 SOME NOTES AND THEIR TIME VALUES

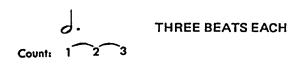
In listening to music and singing, you have probably noticed that some notes last longer than others. In writing music we show this by making different kinds of notes.



Just as an apple can be cut into two halves or four quarters, a semi-breve can be divided into two minims or four crotchets.

DOTTED MINIM

If we place a dot after a minim, it will get three beats — two for the note and one for the dot. This is called a DOTTED MINIM.



A DOT PLACED AFTER A NOTE ALWAYS GETS HALF AS MANY BEATS AS THE NOTE ITSELF

What kind of notes are these? How many beats does each one get?



The stem of a note may go either up or down. But stems always go up on the right side. If the stem goes down, it is placed on the left side of the note.

LESSON 3TIME SIGNATURES AND BARS

In music, a Bar is the distance between two bar lines.

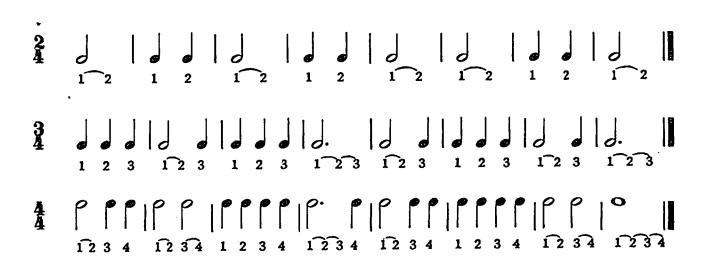
The most common $Time\ Signatures\ are\ \frac{2}{4}$, $\frac{3}{4}$, and $\frac{4}{4}$. The top number always tells us how many beats there are in a bar. The bottom number tells us what kind of note gets one beat.

2	Two beats in a bar
	A crotchet gets one beat

Three beats in a bar
A crotchet gets one beat

Four beats in a bar
A crotchet gets one beat

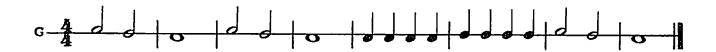
Here are some examples with the beats written in. See if you can clap them while counting out loud.



Notice that we always put a vertical line | called a Bar Line before the note which will receive the first count in the bar. At the end of the piece we put a Double Bar.

LESSON 4UNDERSTANDING NOTATION

If we draw a line and call it G, any note which that line goes through will be named G. If we place a note above the line, it will be the note above G, that is, A. What is the name of the note below the line? Here is a tune with three notes.



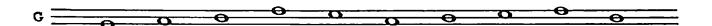
If we add another line above this line, it will be the next note after A. Just remember that each line is a note and the space between the lines is a note. They go up in alphabetical order and we play keys one after another on the keyboard.



If we go from one line to the next, we skip one letter-name for the space and must also skip one key on the keyboard. The same is true if we go from one space to another—we skip the line.



In this next example can you tell which notes are moving in steps and which are skips?



So far we have written music on one, two or three lines. But printed music is always written on five lines called a *Stave*. Just remember that each line and each space represents a note.

LESSON 5THE GRAND STAVE

All we must do to work out the names of all the lines and spaces on the five line stave is to give one line a name. Many years ago people simply put a G on the second line as we did in the last lesson. That G got fancier and fancier until we now make it like this:



Remember that it is still a G and is on the second line. It is a G Clef.

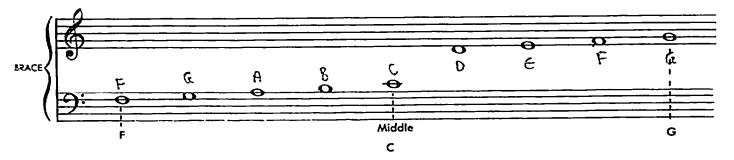
In writing piano music we also use another clef sign. It is called F Clef because it tells us that the fourth line is F. It is interesting to see how this clef grew out of the letter F.



Practise making G clefs and F clefs until you can make them like the ones given here.



When we write music for the piano we put the G clef on one stave and the F clef on another and connect the two with a *Brace*. This is called a *Grand Stave*.



There is another line between the two staves of the grand stave. It is *Middle C* and tells us to play the C nearest to the centre of the keyboard. We put it in only when we want to write C. We now have three *Guide Posts* on the grand stave. The centre line is *Middle C*. The G clef tells us that the second line of that stave is the G above middle C. The F clef tells us that the fourth line of that stave is the F below middle C. Since we know the alphabet very well now, it is easy to work out the names of all the notes in between the *Guide Posts*.

LESSON 6 RESTS

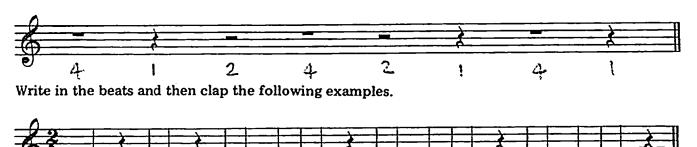
You have already learned about semibreves, minims and crotchets. In music we also have signs for silence. These are called *Rests*. Just like the notes, we have *Semibreve*, *Minim* and *Crotchet Rests*. The *Semibreve Rest* and the *Minim Rest* look very much alike. The only difference is that the *Semibreve Rest* hangs from the fourth line while the *Minim Rest* sits on the third line.



The Semibreve Rest is also used for a whole bar even if there are not four beats in the measure. There are two different ways of making the Crotchet Rest. When it is printed in music it usually looks like the one on the left. But when made by hand, it usually looks like the one on the right. Try to make some of the second type.



Can you identify these rests? How many beats does each one get?





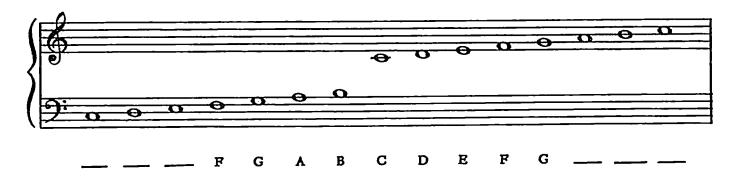


Don't Forget The Whole Bar Rests!



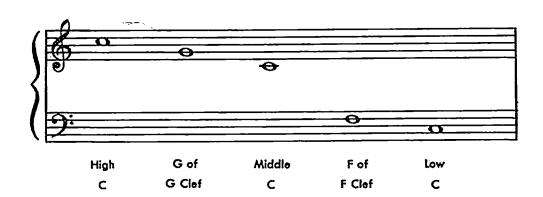
LESSON 7SOME NEW NOTES

Here are some new notes. If you remember that the lines and spaces are in alphabetical order you can very easily work out the names of the three notes below our Guide Post F and the three notes above our Guide Post G.



After you work out the names of these new notes, play them on the piano.

We now have two new Guide Posts: $High\ C$ and $Low\ C$. Here are our five Guide Posts.



Let's learn two new words. So far, we have always called this sign a G Clef. It has another name—Treble Clef. The F Clef 9: also has another name—Bass Clef.

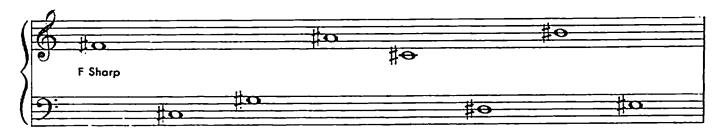
Remember: G Clef = Treble Clef F Clef = Bass Clef

LESSON 8 SHARPS

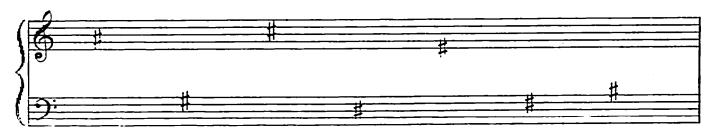
Have you been wondering how to write for the black keys? To do this, we must use a special sign. One of these special signs is called a *Sharp*. It tells us to play the very next key to the right of the one written.

SHARP SIGN

Can you tell the names of these notes? Play them on the piano.



The Sharp takes its name from the line or space where the middle section or box is written. Name these sharps.



Are these sharps written in the right place for the notes which follow them?

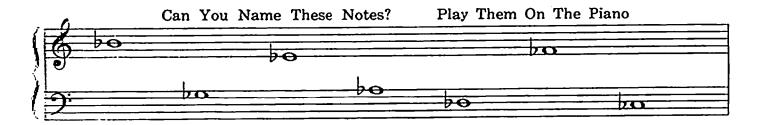


LESSON 9 FLATS

We have already had one sign for writing the black keys. Here is the other:

FLAT SIGN

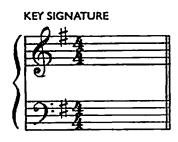
It is called a *Flat* and tells us to play the very next key to the left of the one written.



Like the sharps, the Flats get their names from the line or space where the closed part is written. Name these Flats.



If a sharp or a flat is written next to a note it tells us that that note should be played sharp or flat and that any other note of the same pitch following it in the bar should also be played that way. If, however, the sharp or flat sign is placed between the clef sign and the time signature, it tells as that that note is to be played sharp or flat each time it appears in the piece. This is called the KEY SIGNATURE:



ALL F'S ARE SHARP



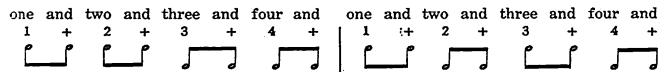
ALL B's ARE FLAT

LESSON 10QUAVERS

You have learned about notes which get one, two, three, and four beats. Now let us learn about a note which gets only half a beat. It is called a Quaver.

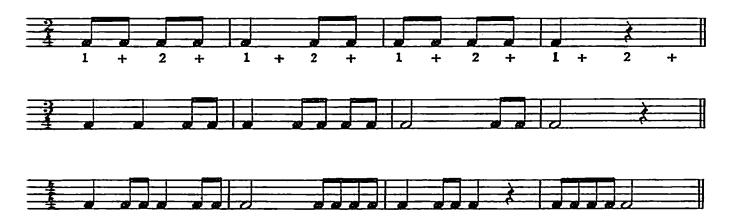


One Quaver Two or more Quavers are connected by a Beam The Quaver Rest Everyone should learn two different ways of counting quavers. Since the beat is divided into two parts, the easiest way is to count it in two parts. Most people say:



This is very easy to understand when all the notes are eight quavers as in the first example. But even when the quavers are mixed with crotchets and minims it is best to go on counting the rands" so that all the beats will be alike.

The beats are written in for the first example. Write them in for the other examples and then that.



you can do this without making a mistake you should try to learn the other way of counting quavers. In this second way, we do not count the "ands"—just the numbers. We have to fit the quaver exactly half way between the two numbers.



meen you can do this one correctly, go back and try to do the other examples without counting "ands".

LESSON 11CURVED LINES AND DOTS

In music, a curved line connects things while a dot shows that they should be separated. If the curved line connects two notes of the same pitch it is called a *Tie* and the notes are spoken of as *Tied Notes*. This means that we play the first one but only count for the second without striking it again. One curved line can tie only two notes. A separate tie must be used to tie each note to the note following it.



when a curved line is placed over or under notes of different pitches it is called a *Slur*. This was to hold each note under the slur until we play the next note. There must not be any still rest in between. Musicians call this type of playing *Legato*; an Italian word meaning bound together. One *Slur* may connect many notes.



When a dot is placed over or under a note it tells us to separate that note from the one which means next. This is just the opposite of Legato playing. The Italian word for this type of playing is Staccato which means "separated".



Two important words to remember: Legato—Connected Staccato—Separated.

LESSON 12 SOME MORE SIGNS AND ITALIAN WORDS

This sign is called a *Natural*. It cancels a sharp or flat and tells us to play the note as matten, disregarding any sharps or flats in the key signature as well as those added in the course the piece. As with sharps and flats, it affects the note each time it comes in the bar where it is written.



piano was invented in 1709, or just over 275 years ago. Before that time there were other instruments which looked something like the piano. They had keyboards with white and black arranged just as they are on the piano. But there was one big difference. It was impossible to play some notes loud while playing others softly. The piano was the first keyboard instrument able to do this. Its inventor, Cristofori, called it a "Soft-Loud". In Italian the words soft and loud are *Piano* and *Forte*. Since we call people we know very well by their first we now call our instrument by its first name — *Piano* — which means soft. But it is made to remember that its full name is *Pianoforte*. This will help us remember the word Forte, which means loud.



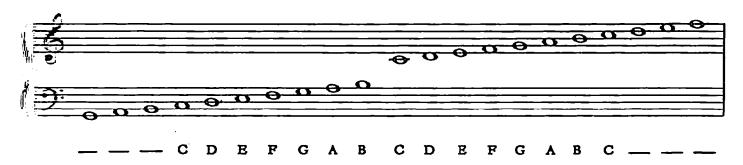
Examposer wants a note or a section of a piece to be soft he uses the sign P, which stands for Fano. If he wants us to play loud, he uses the sign f, which stands for Forte. Remember words and their signs; look for them in your pieces.

PIANO - P- SOFT FORTE - J- LOUD

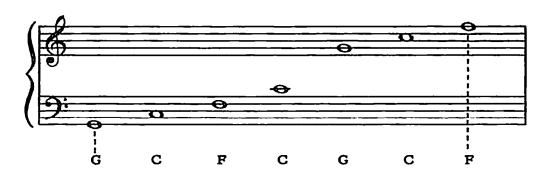
LESSON 13MORE NEW NOTES

The have only a few more notes to learn in order to know all the notes written on the grand stave. And if you remember your musical alphabet they are very easy to work out.

Write in the names of the new notes. Play them on the piano.



in a now have two more Guide Posts for note reading.

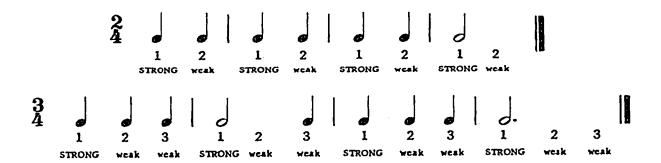


the Octave Sign 8...... is placed over one or more notes, it tells us to play these notes can octave (eight notes) higher than where they were written. If it is placed underneath the trees, it means to play them one octave lower.

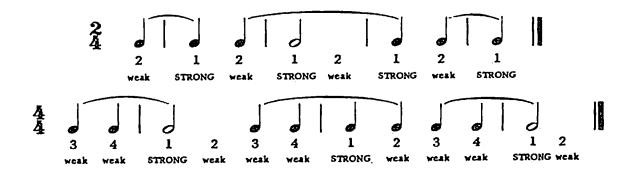


LESSON 14 UPBEATS

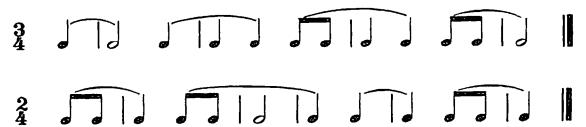
So far, all the rhythms we have counted and clapped have started on the first beat of the bar—that is, they have started on the strong beat. We have had these patterns:



Now we are going to have some patterns which do not start on the strong beat and so do not start from the count of *One*. Since the first beat of the bar is always the strong one and comes after the bar line, we only have to count backwards from the bar line to find what beat to start on.



Here are some for you to work out. What beat does each of these examples start on?



notes which come before the first bar line are called the *Upbeat* because the conductor of chestra always raises his baton before the first beat of the bar.

LESSON 15REVIEW WORK SHEET

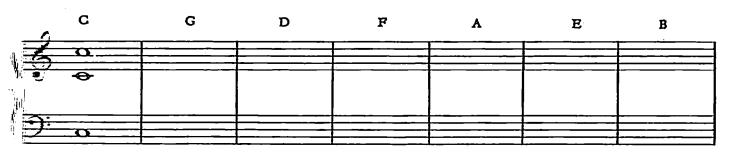
1. Here are some words written with notes. Work out what they spell.



2 Put in the correct time signatures for these examples.



Write three different notes with each of the following letter names.



+ Put in the bar lines. Beware of Upbeats!



LESSON 15 REVIEW WORK SHEET (Continued)

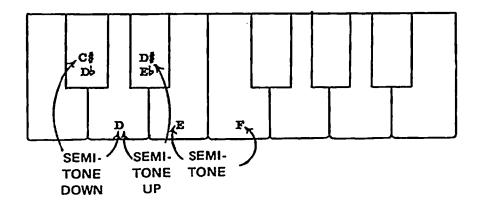
5. Here is your last chance to match them!

j	Quaver
7	Treble Clef
	Dotted Minim
6 4	Sharp
J.	Crotchet
#	${\it Flat}$
p	Natural
9 :	Forte
***	Bass Clef
}	Piano
Ь	Minim Rest
f	Quaver Rest
d)	Crotchet Rest
legato	Semibreve Rest
<u> </u>	Separated
J	Octave Sign
g	Minim
staccato	Connected

PART TWO

LESSON 1TONES AND SEMITONES

A semitone is the distance from any key on the piano to its nearest neighbour on the right or left, whether white or black.



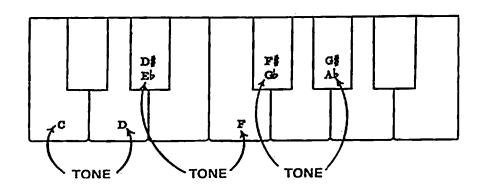
in is case, it does not matter whether we say the semitone is from D to D sharp or from E flat. The important thing is that there must not be any keys between the two keys making the semitone.

semitones involve one white key and one black key. However, there are two semitones weren white keys. Can you find them? Is it possible to have a semitone between two black by: Why?

WEN WAY OF EXPLAINING SHARPS AND FLATS: a sharp raises a note one semitone; a flat lowers a one semitone.

many semitones are there in an octave? If we play all the semitones in an octave, we are playing a Chromatic Scale.

Ewo semitones equal one whole tone. We must always skip one key in playing a whole tone.



Example always a tone between two neighbouring white keys? Is there always a tone between two important keys? Can you play a tone from a white key to a black one?

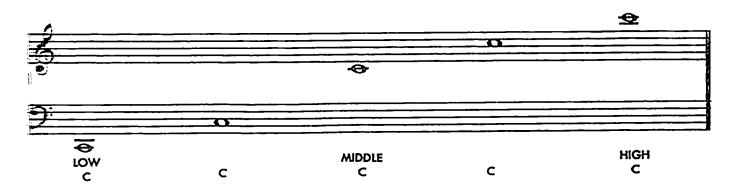
many tones are there in an octave? If we start from any key and play tones until we reach that note, we are playing a Whole Tone Scale.

LESSON 2 LEDGER LINES

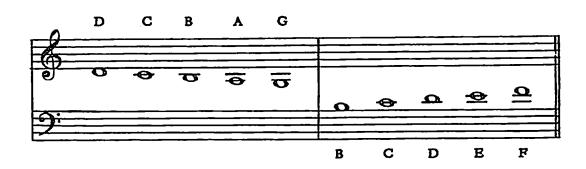
You have already learned the names of all the lines and spaces of the grand stave, but even by using the octave signs we are not yet at the ends of the keyboard. To write these notes, we must add more lines above and below the grand stave. These lines are called *Ledger Lines* and are just large enough to write one note. Remember that the ledger lines and the spaces between are in alphabetical order just as the lines and spaces of the grand staff.



Write the names of the new notes. Notice that *High C* is on the second ledger line above the reble stave, while *Low C* is on the second ledger line below the bass stave. These are two important new guide posts.



many ledger lines would it take to write the top note on the piano? The bottom note? Middle is a ledger line between the two staffs. We sometimes write other notes on ledger lines between the two staffs of the grand stave.

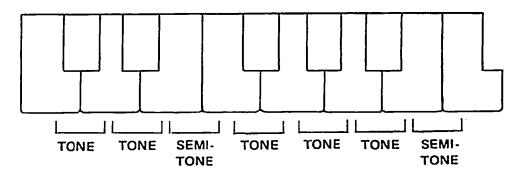


LESSON 3 SCALES

Our word Scale comes from the Italian word Scala, which means a staircase or step ladder. In music, a Scale is a succession of notes starting from any note and moving By Step to the note moctave higher (or lower). You have already learned that a chromatic scale moves by semitones and that a whole-tone scale moves by tones. Most scales are made up of some semitones and some tones.

The white keys from middle C up to the next C make up the C Major Scale. It is the only major scale using only white keys. How many half steps are there in the C Major Scale? How many tones?

The pattern of tones and semitones between the two Cs is called The Major Scale Pattern.



we start on any key on the piano and follow that pattern of tones and semitones we be playing a major scale. Play a major scale starting on F; on G; on D. (Play the first four with the left hand and the last four with the right hand.) Just be careful to follow the second Pattern.

TONE TONE SEMI- TONE TONE TONE TONE

TONE

TONE

scale gets its name from the note on which we start the pattern. This note is called the Key the Home Note, or Tonic. The scale does not sound complete unless it ends on the Key The major scale which has B Flat for its Tonic is a B Flat Major Scale.

all the piano keys are the same width at the back, we can make a pattern of the major. Place the pattern so that the number 1 is behind the key on which you wish to start your. Then play the notes indicated by the numbers and you will have a major scale. But you also learn to play the scale by remembering the pattern of tones and semitones.

-	1		<u> </u>			 		 	
÷ :		2		3	4	5	6	7	8

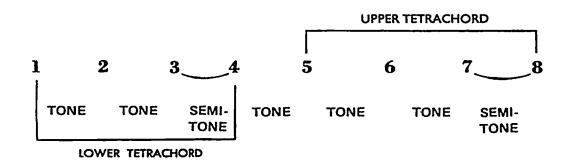
LESSON 4 SCALE DEGREES AND TETRACHORDS

if we say that the semitones fall between E and F and between B and C, we are speaking of only the C Major Scale. But if we say that the semitones fall between the third and fourth notes and between the seventh and eighth notes, we are speaking of all major scales. Since all major scales have the same pattern of tones and semitones, we frequently use numbers to represent the notes. These numbers are called the *Scale Degrees*. The scale degrees of any major scale are the numbers 1, 2, 3, 4, 5, 6, 7, and 8.



The semitones always come between 3 and 4 and between 7 and 8 in a major scale. When writing the scale degrees, mark the semitones with a slur. Play an A Major Scale. Divide the notes between the two hands, playing the first four notes with the left hand and the last four with the right hand, as you did in the last lesson. Notice that each hand plays Tone, Tone, Semitone. These half scales are called Tetrachords.

The major scale is made up of two tetrachords. Each has the pattern of *Tone*, *Tone*, *Semitone*. There is a tone between the two tetrachords.



You must know all of the material presented in this lesson and in Lesson 3 thoroughly before you can move on to Lesson 5 where you will start writing scales on the stave. If you are not some of the Major Scale Pattern, Scale Degrees, and Tetrachords, review Lessons 3 and 4.

LESSON 5WRITING THE MAJOR SCALE

The major scale is a Diatonic Scale. This means that the eight notes have letter names in alphabetical order. Each letter of the musical alphabet is used only once, except the tonic which is repeated as the final note. Since the lines and spaces of the grand stave are also in alphabetical order, the first thing to do in writing a scale is to write in the eight notes on eight consecutive lines and spaces. Start with the key tone and go to its octave.



Next, write in the numbers from 1 to 8 indicating the scale degrees. Mark the semitones with slurs. If the tonic has a sharp or flat, be sure to repeat it when writing the final note.



 $\pm s$ the final step, go back and put in the sharps or flats to make up the major scale pattern. $\pm s$ writing the notes on the stave before putting in the sharps or flats, we make sure that each $\pm s$ will have the correct letter name.

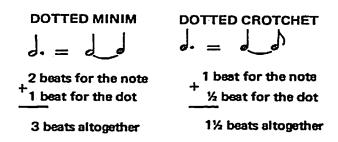


This helps us to understand why a key is sometimes called by its sharp name and sometimes the flat name. Let us take G sharp and A flat as an example. In the key A Major, the seventh make is the black key between G and A. Since the seventh step of the A Major scale must have G for its letter name, it must be G Sharp. In the scale of E Flat Major, the fourth note is once again the black key between G and A. But the fourth note of the E Flat scale must have A for its letter name, so it must be A flat.



LESSON 6 DOTTED CROTCHET

In PART ONE, LESSON 2 (p.7) you learned that a dot placed after a note always gets half as many beats as the note itself. So far, the only dotted note we have used has been the dotted minim. Now it is time to learn about another dotted note – the *Dotted Crotchet*.



are are some common patterns using dotted crotchets. The beats have been written in the first example. Write in the beats for the other examples using "and". Count out loud and the pour when you are sure of the rhythms, try clapping while counting only the numbers.



movine that in all of these examples the dotted crotchet was followed by a quaver note or a mover rest. Since the dotted crotchet received one and a half beats, we need the half beat of a mover note or quaver rest to make up two full beats.

LESSON 7 INTERVALS

An Interval is the distance between two notes. We measure intervals by counting the number of letters involved, including the names of the two notes of the interval. In order to know the interval from C to E, count the letter names C, D, and E. Since there are three letters, the interval is a third. From D to A is a fifth, because there are five letter names — D, E, F, G, and A. In naming intervals, we count from the bottom note to the top one, naming the bottom one first. The interval from F to D means the interval from F up to D, not F down to D.

What is the interval from B to E? From C to B?

WRITING INTERVALS ON THE STAVE

Since each line and each space of the grand stave represents one letter name, we can also measure intervals by counting the lines and spaces from one to the other. This also makes it easy to write intervals on the staff.



Notice that when the interval is a unison, a third, a fifth, or a seventh, both notes are on lines to both notes are in spaces. For seconds, fourths, sixths, and octaves, one is always on a line, the other in a space.

If you play every other white key on the piano, you are playing in thirds. Can you say the musual alphabet in thirds?

Let this time we are only interested in the number names of intervals, such as a fifth, a section, etc. You will gradually learn to distinguish between different intervals with the same number of letter names. For the number names of intervals, sharps and flats do not matter. From A to G is a seventh; from A to G flat is also a seventh; from A to G sharp is still a seventh.

LESSON 8SIX EIGHT TIME

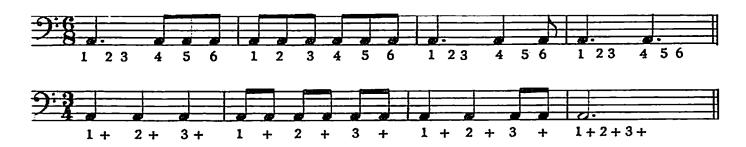
So far, all of the exercises you have had, have had time signatures with 4 for the bottom number. There have been many examples in $\frac{2}{4}$, $\frac{3}{4}$ and $\frac{4}{4}$ time. In all of these, a crotchet received one beat. That is what the 4 on the bottom of the time signature tells us.

Now we are going to have time signatures with 8 on the bottom. § and § are the most common. In any kind of time with 8 for the bottom number, a quaver gets one beat.

CHART OF NOTE VALUES IN § TIME

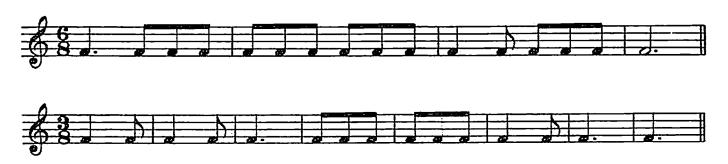


It is important to understand the difference between the six quavers in $\frac{6}{8}$ time and the six quavers in $\frac{2}{3}$ time. In $\frac{2}{3}$ time, the six quavers are linked together in groups of three. In $\frac{2}{3}$ time, the quavers come in three groups of two so that we can still see the three crotchets in the bar.



Since the six quavers in § time are grouped in threes, the dotted crotchet is very important in this kind of time.

Write in the beats and clap these bars in $\frac{6}{8}$ time and $\frac{3}{8}$ time.



LESSON 9KEY SIGNATURES

Now that you have learned to write major scales, you must learn the key signatures which come from the scales. In studying keys and key signatures, three things are most important:

- 1) The order in which the sharps and flats are written.
- 2) The correct number of sharps or flats for the different keys.
- 3) How to tell the key by seeing the key signature.

Here are the scales using one, two, three, and four sharps written with key signatures.



F is always first. Then follow C#, G#, and D# in that order. The key note is on the line or in the space above the last sharp.



Here are the scales using one, two, three, and four flats.



Bb is always first. Then follow Eb, Ab, and Db in that order. Remember the word "BEAD" for the first four flats. The key note is always the next-to-last flat. The key with only one flat is F major.



LESSON 10MAJOR TRIADS

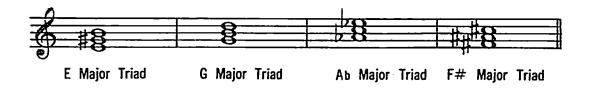
When we strike several notes at one time, we are playing a chord. A chord made up of three notes arranged in thirds is called a *Triad*. This word is easy to remember if you keep in mind that a tricycle has three wheels and a triangle has three corners. *Tri*, the first part of all of these words, comes from a Greek word meaning three.

Say the musical alphabet in thirds. This is the chord alphabet, because most chords are built in thirds. Remember that the lines of the staff are arranged in thirds, as are the spaces.

A Major Triad is made up of the first, third and fifth notes of a major scale. These notes are then called the Root, the Third, and the Fifth of the major triad.



The triad takes its name from the root.



It is possible to build a triad on any note, just as it was possible to start a scale on any note. Build a major triad on each step of the chromatic scale. How many have only white keys? How many have only black keys?

If all the notes of a chord are played at one time, it is called a Solid or Block chord. If the notes are played one after another, it is called a Broken Chord or Arpeggio.



LESSON 11SOME MORE INTERVALS

So far you have used only number names for identifying intervals. However, there are some intervals you have used so often that you should now learn their exact names. To distinguish between intervals with the same number names, we must know the number of semitones.

When you studied tones and semitones, you were learning about two different kinds of seconds. A tone is a larger second than a semitone. The words Major and Minor mean Larger and Smaller. A tone is a Major Second; a semitone is a Minor Second. (In order to be a minor second, the semitone must use two different letter names — from E to F, or from C to D Flat. If only one letter name is used, as from C to C‡ or from E Flat to E, the interval is called a chromatic semitone and is not a second at all).



Remember that a minor second is a semitone; a major second is a tone.

We used two very important intervals in playing and writing major triads. From the root to the third of a major triad is always a *Major Third*. It has four semitones (or two tones).



From the root to the fifth of a major triad is always a *Perfect Fifth*. There are seven semitones (or three tones and a semitone) in a perfect fifth. This is also the distance from the first note of the major scale to the fifth note.



REMEMBER THESE INTERVALS:

MINOR SECOND

MAJOR SECOND
two semitones

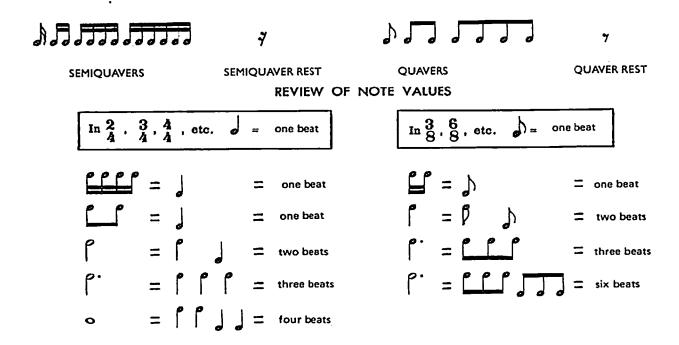
MAJOR THIRD four semitones

PERFECT FIFTH seven semilones

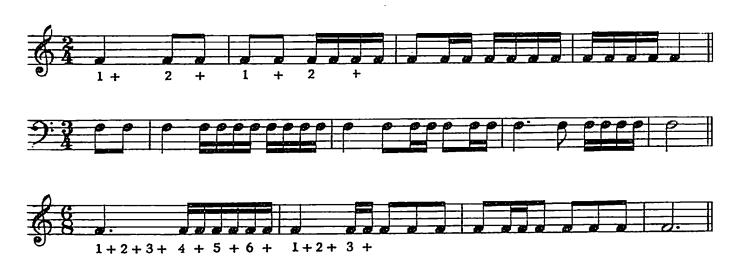
LESSON 12 SEMIOUAVERS

A Semiquaver is a black note with two flags. Since it takes two semi-quavers to equal one quaver and four semiquavers to equal one crotchet, they usually come in groups — of two, four, six.

Notice that the difference in appearance between semiquavers and quavers is the double flag or beam for the semiquaver.

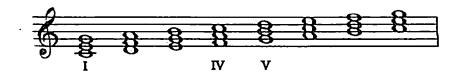


Here are some examples of common rhythms using semiquavers. Write in the beats and clap. Always use "ands" in counting semiquavers. Sometimes it is even necessary to divide the beat still more -1 a + a 2 a + a, etc. Use "ands" in these bars.



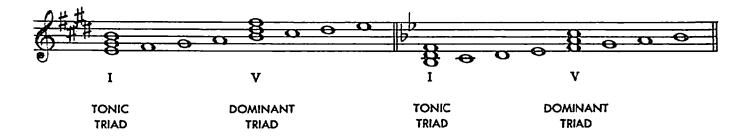
LESSON 13TONIC AND DOMINANT

If you build a white-key triad on each step of the C Major scale, you will find that only three are major triads. Only the ones on the first, fourth, and fifth degrees are major, and we are only interested in the ones on the first and fifth degrees at this time.



The first degree of the scale is called the *Tonic*. The triad built on the first degree of the scale is called the *Tonic Triad*. Most pieces start with a tonic triad and almost all pieces end with either the tonic note or a tonic triad. You can see how important it is in any key.

The fifth degree of the scale is called the *Dominant*. The word *Dominant* means "of greatest importance". You will soon learn how important the dominant is in the music you play. The triad on the fifth degree of the scale is called the *Dominant Triad*.



We represent the notes of the scale by the numbers 1, 2, 3, 4, 5, 6, 7, and 8, the scale degrees. When we speak of the chords which are built on the different degrees of the scale, we use Roman numerals. The chord on the first degree of the scale, the tonic triad, is represented by the Roman numeral I. The chord on the fifth degree of the scale, the dominant, is represented by the Roman numeral V.

IMPORTANT: The first degree of the scale — the Tonic.

The fifth degree of the scale — the Dominant.

The triad built on the Tonic—The Tonic Triad—represented by I.

The triad built on the Dominant—The Dominant Triad—represented by V.

LESSON 14HARMONISING MELODIES

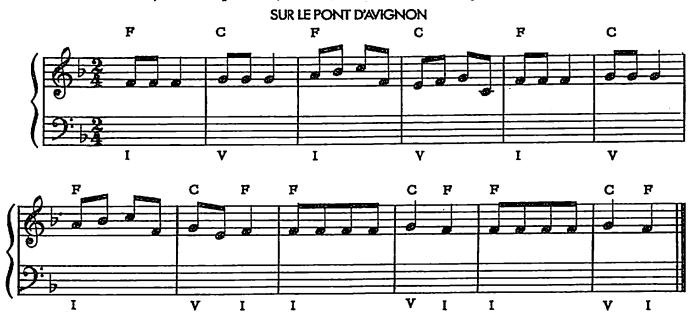
Many melodies can be harmonised using only the Tonic and Dominant triads. In order to give you an opportunity to use your knowledge of chords, here are some folk songs to play.

Playing the chords in this way does not give a very polished accompaniment. But as you learn more about chords, you will be able to improve the left hand parts. Even now, however, you can see chords in action.

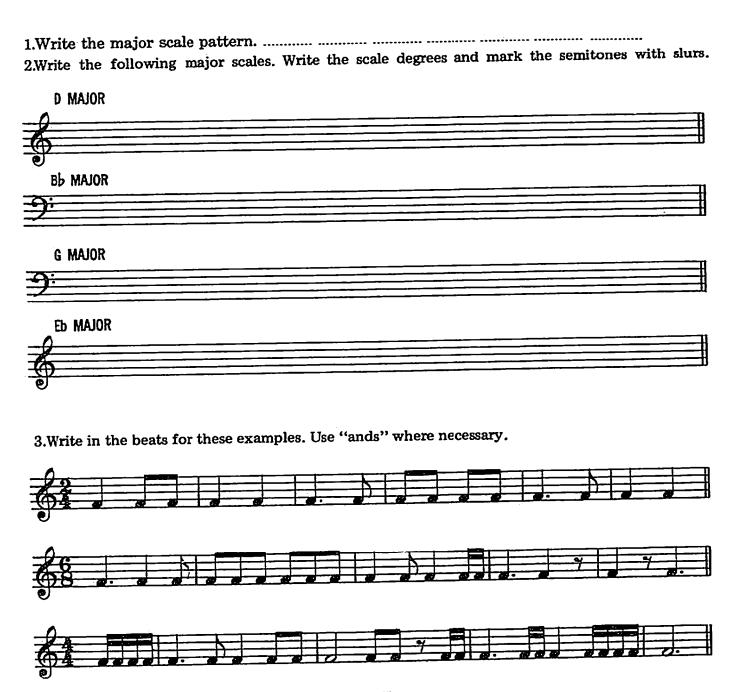
I

I

In the remaining examples, the left hand part is not written in. Instead, you will find the letter name of the triad you are to play. C indicates a C Major triad, F an F Major triad. The Roman numerals have also been written in to indicate whether the chord is tonic or dominant. Write in the triads at first; but with practice, this should not be necessary.



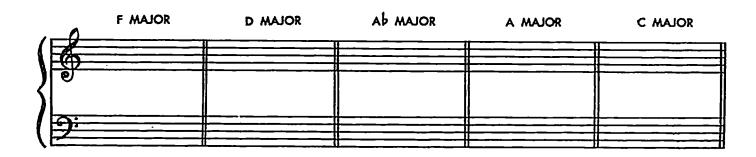
LESSON 15REVIEW WORK SHEET



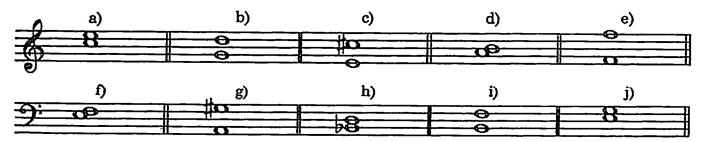
- 4. Mark the true statements T; the false ones F.
 - a) 6_8 time is the same as 3_4 time.
 - b) The triad on the first degree of the scale is called the tonic triad.
 - c) Any major triad takes its name from the name of its root.
 - d)The key signature of E Major has four flats.
 - e)It is possible to start a major scale on any note.

LESSON 15REVIEW WORK SHEET (Continued)

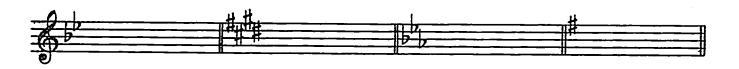
5. Write the following key signatures. Indicate the Key Note.



6. Identify these intervals. Where you know the exact name, be sure to use it.



7. Write the tonic and dominant triads in the keys indicated by these key signatures.



- 8. Fill in the blanks.
- a) A major second is a
- b) There are semitones in a perfect fifth. A scale is made up of semitones only.
- c)One crotchet note equals semiquavers.
- d)The chord on the fifth step of the scale is called the
- e)Lines added above or below the staff are called lines.
- f)The scale of A Major has sharps.
- g) A chord where the notes are played one after another is called a chord.

PART THREE

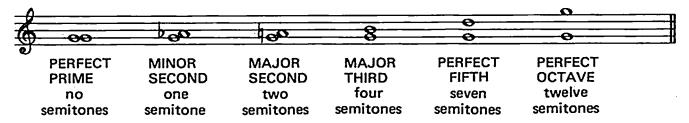
LESSON 1

A REVIEW OF INTERVALS — MINOR THIRDS

An interval is the distance between two notes. We measure intervals by counting the number of letters involved including the names of the two notes making up the interval. From A up to D is a fourth because there are four letter names involved — A, B, C, and D. In PART TWO you learned the number names of all intervals (seconds, thirds, fourths, etc.)



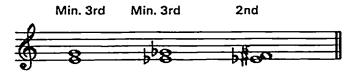
To distinguish between different intervals with the same number of letter names – from C to D or from C to D flat – it is necessary to count the number of semitones. We have already learned the following exact names of intervals: Minor Second – one semitone; Major Second – two semitones; Major Third – four semitones; Perfect Fifth – seven semitones. We now add: Perfect Unison (or Prime) – same note, no semitones; Perfect Octave – twelve semitones.



Since the words Major and Minor mean larger and smaller, it is easy to change a major interval into a minor one. Simply lower the upper note one semitone. A major second has two semitones while a minor second has only one. In the same way, a major third has four semitones and a minor third only three:



In order to be a minor third, however, there must be three different letter names involved. From E to G is a minor third because there are three semitones and three letter names (E, F, and G). From E flat to G flat is also a minor third. But from E flat to F sharp is not a minor third because, although there are three semitones, there are only two letter names — E and F.



LESSON 2MINOR TRIADS

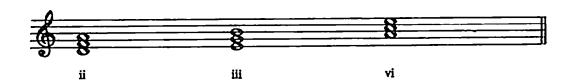
A major triad is made up of a root, a major third, and a perfect fifth. A Minor Triad is made up of a root, a *minor third*, and a perfect fifth. It is easy to change a major triad into a minor triad. Simply change the major third into a minor third by lowering it one semitone. Keep the same letter name.



If we now build a white-key triad on each note of the C Major scale, we will have an opportunity to study major and minor triads.



We have already seen that the triads on I, IV, and V are all major triads, and in PART TWO you harmonized melodies using tonic (I) and dominant (V) triads. We can see from the example above that three of the other triads are minor: the ones on the second, third, and sixth degrees of the scale.



The Roman numerals used to represent minor triads are usually made with lower case letters instead of the capital letters we use for major triads. Thus, these minor triads will be designated ii, iii, and vi.

LESSON 3HARMONISING MELODIES USING MINOR TRIADS

So far, you have harmonised folk tunes using only tonic (I) and dominant (V) triads. Now that you have studied minor triads and learned how to form them, you can also use them in harmonising melodies in major keys. As you saw in the last lesson, the triads on the second, third, and sixth degrees of the major scale are minor triads. Of these three, the ones on ii and vi are the ones most frequently used.

For the chord symbols which we shall put above the melody line, we will use Gm, and Dm to indicate G minor, and D minor triads, since that is the way you will find them written in popular music. However, you should also know that g and d are sometimes used to indicate minor triads.

Here is an example of a folk song using both major and minor triads in its harmonies. Be sure to practise finding and playing the chords before trying to play the two hands together.

POLISH FOLK TUNE



LESSON 4 MINOR SCALES AND THE MINOR SCALE OUTLINE

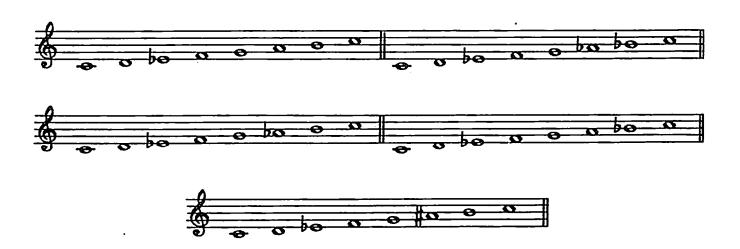
There is only one form of the major scale, but there are several different kinds of minor scales. We will start our study of minor scales by learning how they are alike. In all forms of the minor scale, the scale degrees 1, 2, 3, 4, 5, and 8 are always the same. Let us call this the *Minor Scale Outline*. It is only the scale degrees 6 and 7 which change and distinguish one form of the minor scale from another.

If we compare the notes of the minor scale outline with the corresponding notes of the major scale, we find that the only difference is that the third note of the minor scale outlines is one semitone lower, just as the third of the minor triad was one semitone lower than the third of the major triad. In fact, we may think of filling in the notes around the minor triad to form the minor scale outline.



As you can see, the semitone comes between 2 and 3 in the minor scale outline, while it comes between 3 and 4 in the major scale.

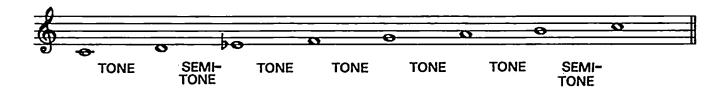
If you try to fill in the sixth and seventh scale degrees at the piano, you will find that there are five possibilities: A natural-B natural, A flat-B flat, A flat-B natural, A natural-B flat, and A sharp-B natural. Play the scale using each of these pairs of notes to fill in the sixth and seventh degrees going up and down. Which ones sound best to you? In music, the first, second, and third pairs are the ones we meet most frequently, the fourth less often, and the fifth almost never.



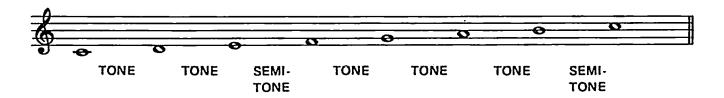
LESSON 5THE ASCENDING MELODIC MINOR SCALE

Now that you have learned the minor scale outline — those notes of the minor scale which are the same in all forms — we can start to learn how to fill in the sixth and seventh degrees correctly to form the different varieties of minor scales. Remember it is only the sixth and seventh degrees which distinguish one form of the minor scale from another.

Let us start out by using a tone from 5 to 6 and a tone from 6 to 7. That will leave a semitone from 7 to 8.



Now compare that to the parallel major scale pattern:



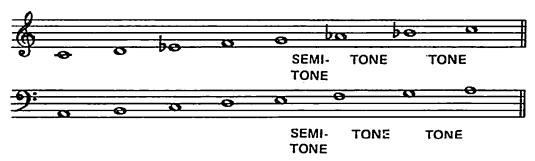
You can see that the only difference is that the semitone which comes between 3 and 4 in the major scale comes between 2 and 3 in this form of the minor scale.

The tones between 5 and 6 and 7 and the semitone between 7 and 8 make this scale move up very smoothly. For that reason, it is called the ASCENDING MELODIC MINOR SCALE. The word ascending means "going up," and you will almost always find this form of the minor scale going up.

The ascending melodic minor scale on C has only an E Flat. But when you studied the correct order of flats in PART TWO, you learned that the first flat is always B Flat. So at this time we will have to write the ascending melodic minor scale without using a key signature. Simply write in the sharps or flats needed to make up the correct pattern of tones and semitones.

LESSON 6NATURAL MINOR SCALES AND MINOR KEY SIGNATURES

In Lesson 5 we used the pattern TONE TONE SEMITONE for the upper tetrachord of a minor scale, just like the upper tetrachord of the major scale. But we found that the notes of the Ascending Melodic Minor Scale did not correspond to the pattern of flats and sharps used in key signatures. Now let us try some scales following the pattern SEMITONE TONE for the upper tetrachord.



Notice that the scale starting on C has E flat, A flat, and B flat. Is there any key signature which uses those flats? Did you notice that the scale on A has no sharps or flats, just like C major? When a major and a minor scale use the same key signature, we speak of them as RELATIVES: C minor is the relative minor of E flat major; A minor is the relative minor of C major. The relative minor is always found on the sixth degree of the major scale. (We can also find the relative minor by counting down three semitones from the tonic of the relative major).



This form of the minor scale, using only the notes of the key signature with no alterations, is called the NATURAL MINOR SCALE. There are not many familiar melodies based on this scale, but "God Rest Ye, Merry Gentlemen" is one. Most melodies use the pattern we learned for the ascending melodic minor scale when they are going up and this form when coming down. For that reason, the Natural Minor Scale is also known as the Descending Melodic Minor Scale.

It will be easy to remember which form of the melodic minor scale has the raised sixth and seventh degrees and which the lowered if you simply think that when going up we raise them and when coming down we lower them. That is, in C minor we use A natural and B natural going up and A flat and B flat coming down. We can see this clearly in this C Melodic Minor Scale.

REMEMBER: Raise — Up; Lower — Down



Ascending Melodic Minor Scale;

Descending Melodic Minor Scale

LESSON 7PIANO-STYLE ACCOMPANIMENTS

It is not difficult to change the simple chords you have been playing into piano style accompaniments. All you have to do is find a way of spreading the notes of the chord out over the whole bar instead of playing them all together on the first beat. Here are some common patterns in different kinds of time.



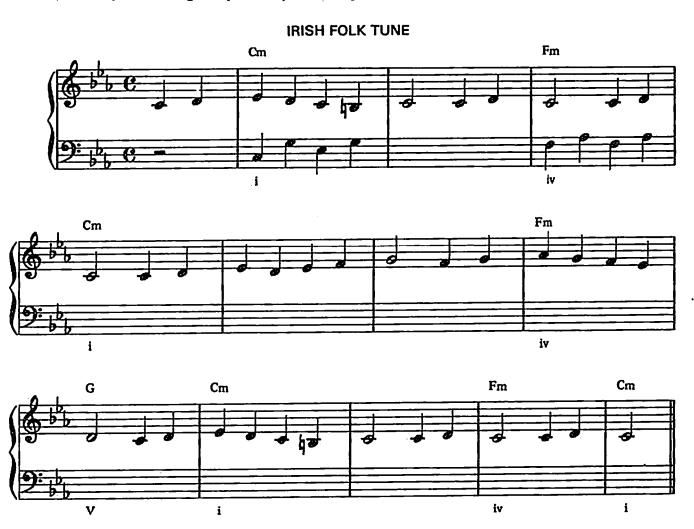
Of course, the possibilities are unlimited, and you can use more elaborate forms as your skill increases. Try this Czech Folk Song, first playing the chords on the first beat of the bar, then with the accompaniment written in, and finally using some of the figures given above. Try to decide which sounds best.



When you can do this, go back and try playing good piano style accompaniments for some of the other melodies you have harmonised. In general, it should not be necessary to change any of the harmonies. But occasionally, the form of the accompaniment figure will make harmony changes on individual notes difficult or impossible to play. Then it may become necessary to leave out one chord. Be on the lookout for interesting accompaniment patterns in the pieces you study.

LESSON 8HARMONISING MINOR KEY MELODIES

With the knowledge of major and minor triads which you already have, it is possible to harmonize some simple melodies in minor keys. We will not investigate the qualities of the chords on the different degrees of the minor scale at this time. Simply follow the indications for major and minor triads. As in the past, play the melody first with a chord accompaniment; then try it with a good piano style accompaniment.



A suggestion for one possible form of accompaniment is given in the first bar. In bar 3, where the melody has the note C of the F minor triad, the suggested accompaniment figure has only F and A flat. We could play all three notes in the left hand if we moved the chord down an octave, but then it would sound too deep. If you practise regularly at working out accompaniments to melodies, many different ways of solving the problems will come up. Harmonising melodies in this way is only meant for folk tunes and popular songs and not for the works of the great composers. As your knowledge of theory increases, you will be able to supply better and more polished accompaniments. At this time, you are just getting practice in using your knowledge of major and minor triads.

LESSON 9THE HARMONIC MINOR SCALE

The third and last form of the minor scale is called the *Harmonic Minor Scale*. As its name implies, it is the form which determines the qualities of the various chords, whether they are major, minor, or otherwise. We might also say that the notes of this scale come from the notes of the principal chords. In the folk tune in C minor which you harmonized in Lesson 8, the tonic triad was made up of the notes C, E flat, and G; the iv chord or subdominant was made up of the notes F, A flat, and C; and the dominant was made up of the notes G, B, and D.

Or, arranged in alphabetical order, as all scales must be,

CDE flat FG A flat BC

These are the notes of the harmonic minor scale. Its notes are the same whether we play it going up or coming down. We still have semitones between two and three and between seven and eight, but we also have a semitone between five and six which leaves 3 semitones between six and seven.



Since the key signature of C minor has three flats, B flat, E flat, and A flat, and the Harmonic Minor Scale has B natural, it will be seen that in writing this scale, we must add the natural to the seventh degree. In all harmonic minor scales, the seventh degree must be raised one semitone. This supplies the major third for the dominant triad.

Now let us compare the qualities of the principal chords in major and minor keys.

	IN MAJOR	IN MINOR
I (TONIC)	MAJOR	MINOR
IV (SUBDOMINANT)	MAJOR	MINOR
V (DOMINANT)	MAJOR	MAJOR

In major keys, tonic, subdominant, and dominant are all major. In minor keys, tonic and subdominant are minor, but the dominant is major.

REMEMBER: The dominant is almost always major whether we are in major or minor.

LESSON 10TRIPLETS

So far, you have learned to divide a crotchet into two quavers or four semiquavers. But sometimes a composer may want to divide a note into three equal parts. Such a group is called a TRIPLET and must be indicated by a sign -3—1. A crotchet equals two quavers or a triplet of quavers.

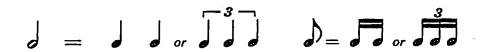


When a piece is made up of a mixture of triplets and true quavers, the triplets should all be marked with the triplet sign. Here is an example.



If a whole piece is made up of triplets, the composer usually indicates only the first few. After that, he will expect you to understand that the others are the same.

Other notes beside the crotchet may be divided into triplets. Any three equal notes played in the time normally taken by two form a triplet. A minim equals a triplet of crotchets; a quaver note equals a triplet of semiquavers.



In order to decide what kind of note is equal to a given triplet, simply think of what kind of note would be equal to two notes of the same value as the notes of the triplet. On the other hand, if you are writing and wish to use a triplet, think of dividing the note into two parts, and that will be the same kind of note value you should write for your triplet.

LESSON 11 EXACT NAMES OF ALL MAJOR, MINOR, AND PERFECT INTERVALS

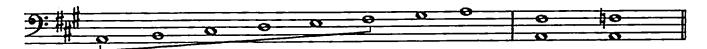
You have already learned to identify the number names of all intervals and the exact names of major and minor seconds, major and minor thirds, and perfect unisons, fifths, and octaves. Now it is time to learn the exact names of the remaining major, minor, and perfect intervals: major and minor sixths and sevenths and perfect fourths.

From the tonic to the fourth note of the scale, whether major or minor, is a perfect fourth. How many semitones are there in a perfect fourth? (Hint: count the semitones from C to F.)



PERFECT FOURTH: Five Semitones

From the tonic to the sixth note of the major scale is a major sixth. Since the words major and minor mean larger and smaller, all we need do to form a minor sixth is to lower the upper note of a major sixth one semitone.



MAJOR SIXTH: Nine Semitones

MINOR SIXTH: Eight Semitones

Similarly, from the tonic to the seventh note of the major scale is a major seventh. That makes eleven semitones, one less than an octave. The minor seventh is one semitone smaller and has ten semitones, two semitones less than an octave.



MAJOR SEVENTH: Eleven Semitones (one less than an octave)

MINOR SEVENTH: Ten Semitones (two less than an octave)

IMPORTANT: Unisons, fourths, fifths, and octaves are the only intervals which can be perfect. They are the same in all forms of the major and minor scales. Seconds, thirds, sixths, and sevenths may be either major or minor. From the tonic to the second, third, sixth, or seventh notes of the major scale make a major second, third, sixth, or seventh. The minor interval is always one semitone smaller than the major.

LESSON 12THE DOMINANT SEVENTH CHORD

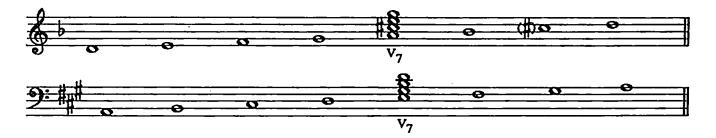
Not all chords are triads. Some have four or even more different notes. The most common of these chords is the DOMINANT SEVENTH CHORD. As you might guess from its name, it is built on the dominant, the fifth degree of the scale. It is formed by adding to the dominant triad a note a minor seventh above the root (or three semitones above the fifth of the triad).



You should practise playing dominant seventh chords on the piano. Start by playing minor sevenths on each note of the chromatic scale. Remember that a minor seventh is a whole step less than an octave. Practise playing minor sevenths until you have the sound in your ear and the feel in your hand. When you have done this, build a major triad on each note of the chromatic scale and add to it the note a minor seventh above the root (as shown in the example above).

Like the dominant triad, the dominant seventh chord is the same in both major and minor. Its chord symbol is V7 (or G7, F7, or D7, etc. depending on the root). It is very important to think of the dominant seventh chord in relation to the key of which it is the dominant. If you think of a dominant seventh chord on G (a G7 chord), you must remember it is not in the key of G. It is in the key of C (major or minor), since G is the dominant of C.

To help you think of the dominant seventh chord in relation to its key, play all the major and minor scales you know, stopping on the fifth degree to build a dominant seventh chord. Be sure to practise doing this with both hands. You may start out following the example above, but as you develop more skill, you may be able to form the dominant seventh chord without first forming the triad and the seventh separately.

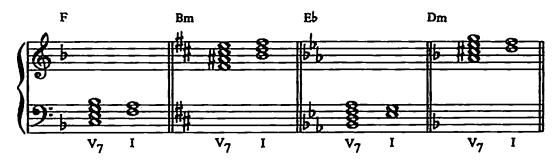


Look for dominant seventh chords in your pieces.

VERY IMPORTANT: The chord symbol V7 indicates a chord with a seventh built on the dominant. The Roman numeral V indicates the scale degree, while the Arabic 7 indicates that the chord contains the interval of a seventh.

LESSON 13USING THE DOMINANT SEVENTH CHORD

In pieces, the dominant seventh chord will usually be followed by a tonic triad. Most pieces end with the chords V7 - I (or V - I). These chords can also be used to mark the end of a section of a piece. In music, an ending figure of this sort is called a CADENCE. There are many different kinds of cadences, but the most important is the Perfect cadence, which consists of the chords V7 - I (or V - I). In order to get the sound of this cadence in your ear and the feel of it in your hands, you should practise playing dominant seventh chords in as many keys as possible, following each with its tonic triad. Generally, in this progression, the fifth is left out of the tonic triad. But you should practise playing the cadence both ways. Don't forget the minor keys!



Because the dominant seventh chord has four different tones, it may sometimes present difficulties for piano style accompaniments. Sometimes one of the notes is omitted — most frequently the fifth. Here are a few solutions and suggestions for piano style dominant seventh chords.



It is impossible to give a rule which tells you when to use a dominant triad and when to use a dominant seventh chord. Your ear must tell you. Go back to the melodies you have already harmonised and substitute a dominant seventh chord for each dominant triad. Listen very carefully and try to decide which sounds better. It is only through this kind of listening and experimenting that you will develop real skill at harmonising melodies at the piano.

Check the endings of the pieces you are playing to look for perfect cadences. Listen for the difference between V - I and V7 - I.

LESSON 14SUMMARY OF MINOR SCALES AND TRIADS

There are two different ways of relating minor keys to major keys. If we think of major and minor keys starting on the same tone, we speak of *Parallel* major and minor keys: C major and C minor; E major and E minor. If we think of the major and minor keys using the same key signature, we speak of *Relative* major and minor keys: C major and A minor; F major and D minor.



The minor third is the characteristic interval of minor scales and triads. It is the only difference between the major triad and the minor triad. And if we think about the minor scale in relation to the parallel major, this minor third is the only note changed to form the ascending melodic minor scale.



In learning the minor scales, it is helpful to remember that the three forms differ from one another only in the sixth and seventh degrees. The other notes of these scales are always alike. Just think of the minor key outline, which consists of those notes of the scale which do not change.



In the ascending melodic minor, the sixth and seventh degrees are raised because we are going up and that helps us move up more smoothly; descending, the sixth and seventh degrees are lowered to help us move down more smoothly. This descending form of the scale uses the notes of the minor key signature and is, therefore, called the natural minor. In the harmonic minor scale, the seventh is raised so that the dominant triad will be major.

LESSON 15 REVIEW WORK SHEET

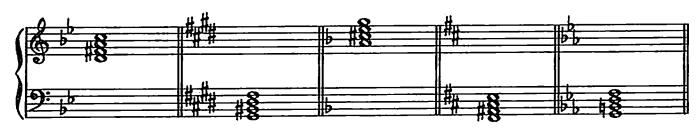
1.	How many forms of the minor scale are there in common use?								
	Name them.	lame them							
	In the ascending melodic minor scale are the sixth and seventh degrees raised or								
2. a) What is the	relative mind	or of each of	the following	; major keys	? D major_	;		
	E major		; E flat m	ajor	;	A major	•		
b) Name the re	lative major	of each of th	e following n	ninor keys.	G minor	;		
	A minor	; F	minor	; E mi	nor	_; B flat	minor		
()Give the par	allel major o	or minor of th	ne following l	keys. G maj	or	• •		
	D minor	;	B flat major	·;	F sharp	major	·		
3.	Write the ke	v signatures	of these keys						
_0	B MINOR	C SHARP MINOR	B FLAT MAJOR	E MAJOR	G MINOR	A FLAT MAJOR	F SHARP MINOR		
	· · · · · · · · · · · · · · · · · · ·								
19	•								
4. _0	Write the fo	ollowing cho	rds. D FLAT MAJOR	G SHARP MINOR	C7	B FLAT MAJOR	A7		
5. Write in the counts for these examples.									
	3		3	3 4 4 1	3		3		
* a	n alternative v	vay of writing	落蘆						

LESSON 15REVIEW WORK SHEET (Continued)

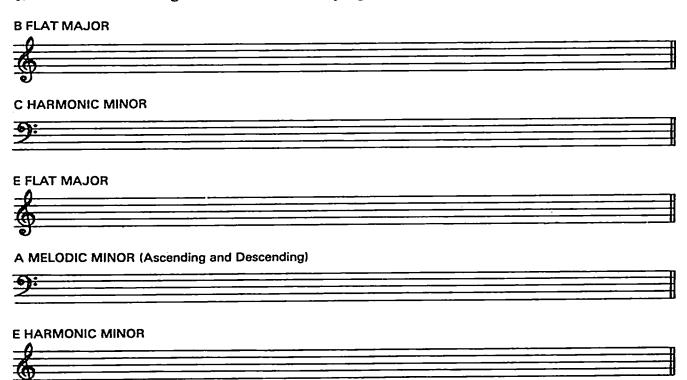
6. Write the dominant seventh chord and tonic triad indicated by each of these major key signatures.



7. Resolve each of these dominant seventh chords to its tonic minor.



8. Write the following scales. Use correct key signatures.



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