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A MUSIC PRIMER

FOR SCHOOLS

BY

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PREFACE.

THIS Primer was written at the suggestion of the Rev. Sir F. A. Gore Ouseley, Bart., Professor of Music in the University of Oxford, and has received his revision and approval.

It is intended to be introductory to his Treatises on Harmony and Counterpoint.

As its title implies, it has special reference to the requirements of Schools.

Any remarks which may tend to improve future editions will be thankfully received and fully considered by the authors.

WESTMINSTER SCHOOL,
July 1873.

In the present edition a few corrections have been made, and an Appendix containing exercises has been added.

WESTMINSTER SCHOOL,
January 1874.

CONTENTS.

INTRODUCTION.

1. SOUND is the effect on the ear of a wavelike (undulatory) motion of an elastic medium, caused by the vibrations of an elastic body.

2. When the vibrations occur at regular intervals, and the waves are therefore of equal length, a *musical* sound is produced.

3. Musical sounds differ from each other (independently of their *duration*) in *intensity*, *character*, and *pitch*,—determined respectively by the *extent*, *form*, and *frequency* of the vibrations.

4. *Intensity*, which depends on the extent of the vibrations, regulates the loudness or softness of a sound.

5. *Character*, which is also called *quality* or *complexion* (French *timbre*, 'stamp'; German *klangfarbe*, 'sound-tint'), has already been said to depend on the form of the vibrations. Difference in character enables us to distinguish between voices and instruments, different kinds of voices, and different kinds of instruments.

6. The human voice may be divided into two classes, each of which may again be subdivided, as follows :—

1. *Female* or *high voices* (including those of children of both sexes):—
    1. *Soprano* or *Treble*, the highest;
    2. *Mezzo-soprano*, the intermediate;
    3. *Contralto*, the lowest.

2. *Male* or *low voices*:—

1. *Alto* or *Countertenor*, an exceptionally *high* voice;
2. *Tenor*, the highest ordinary voice;
3. *Barytone*, the intermediate;
4. *Bass*, the lowest.

The terms 'contralto,' 'alto,' and 'countertenor,' are used somewhat vaguely, all three being applied to voices of the same range. 'Contralto' is generally used of a female voice, 'countertenor' of a male, 'alto' being sometimes inaccurately applied to either.

The names of the voices are thus derived:—

1. **Bass**, Low Latin *bassus*, 'broad.'
2. **Barytone**, Greek *βαρύς*, 'heavy,' 'deep,' and *τόνος*, 'a tone.'
3. **Tenor**, Latin *teneo*, 'I hold': so called because it formerly held the principal melody when sung by men. This was called *cantus*, or *canto*, when sung by boys or women.
4. **Countertenor**, Latin *contra tenorem*, answering to the tenor.
5. **Alto**, Latin *altus*, 'high.'
6. **Contralto**, Latin *contra altum*, answering to the alto.
7. **Mezzo-soprano**, Latin *medius*, 'middle,' and Low Latin *superanus*, 'high.'
8. **Soprano**, Low Latin *superanus*, 'high.'
9. **Treble**, Latin *triplex*, 'triple': so called, either as applied to the third (i.e. the highest) octave of the vocal register, or as being formerly the third (i.e. the highest) part in part-singing.

7. *Musical Instruments* may be divided into three classes:—

1. Stringed instruments;
2. Wind instruments;
3. Instruments of Percussion;

of which the principal are the following:—

1. *Stringed instruments.*

1. Violin.
2. Viola.
3. Violoncello.
4. Double Bass.

} Their vibration effected by the bow.

5. Harp.
6. Guitar. } Played by hand.
7. Pianoforte. With keys.

2. *Wind instruments.*

(1) Of Wood :—

1. Piccolo.
2. Flute. } Without reeds.
3. Hautboy. OBOE
4. Clarinet.
5. Bassoon. } With reeds.

(2) Of Metal :—

1. Trumpet.
2. Cornet.
3. Horn.
4. Trombone. } With mouthpiece, and of brass.

(3) Of Wood and Metal :—

1. Organ.
2. Harmonium. } With keys.

3. *Instruments of Percussion.*

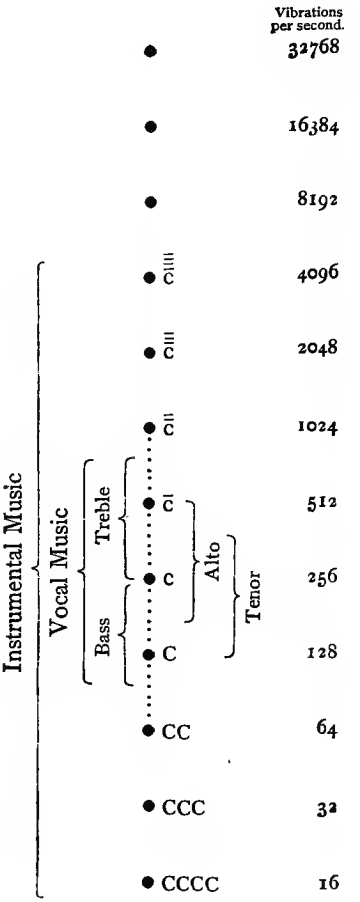
1. Drum.
2. Cymbal.
3. Triangle.

8. *Pitch* has been already said to depend on the frequency of the vibrations : a sound being higher or lower as the vibrations are more or less frequent.

9. There must be at least sixteen complete (or double) vibrations in a second to produce a musical sound.

10. The sound which is produced by twice as many complete vibrations as are required to produce any given sound is called the

octave of that sound; and on this principle, starting from the sound produced by sixteen vibrations, it has been shown that the human



ear can distinguish sounds extending through eleven octaves,—the upper limit being the sound produced by 32,768 vibrations in a second.

11. An octave, as its name implies, is so called because it is the eighth of the series of sounds into which the interval between any sound and its octave is most commonly divided. It so perfectly coincides with the first sound of the series as to appear the same. Hence, excluding the octave, there are in this series seven distinct sounds, constantly recurring in the same order as we ascend in pitch, and forming what is called the *Diatonic scale.*

12. This series is named after the first seven letters of the alphabet, or after the syllables Do, Re, Mi, Fa, Sol, La, Si: of which Do corresponds to C; thus—

C	D	E	F	G	A	B	C
Do	Re	Mi	Fa	Sol	La	Si	Do.

Of these, Do was substituted for Ut, for the sake of the better emission of sound; the seven syllables originally used being the initial syllables of a verse in a hymn to St. John:—

Ut queant laxis — *Re*sonare fibris
*Mi*ra gestorum — *Fa*muli tuorum,
*Sol*ve polluti — *La*bii reatum;
*S*ancte *I*ohannes.

These seven letters may be made to denote the absolute pitch of a note by such a system as that used in the figures to §§ 10 and 35, though other systems are found.

In Germany B is called H; and what we call B♭ is called B.

Experiments show that, Do being the first or lowest sound of the scale,

for every 24 vibrations of Do there are 27 of Re
" " " 30 of Mi
" " " 32 of Fa
" " " 36 of Sol
" " " 40 of La
" " " 45 of Si
" " " 48 of Do.

Thus, if we take Do to be the note of 256 vibrations, we get the series

c	d	e	f	g	$\bar{a}$	$\bar{b}$	$\bar{c}$
Do	Re	Mi	Fa	Sol	La	Si	Do.
256	288	320	341	384	426	480	512

The *absolute* pitch of a note is fixed by the number of vibrations; the *relative* pitch of two notes is found by comparing these: and just as the interval

between two notes is an octave if the ratio of their vibrations is as two to one, so the interval between any two notes is measured by the ratio of their vibrations.

So too the sum of any two intervals is found by multiplying the corresponding ratios: and the difference by dividing them.

Hence the intervals from Do to each of the other notes of the scale in order are as follows: from

Do to *Re*	is called a	*second,*	and measured by	$\frac{27}{24} = \frac{9}{8}$
„ *Mi*	„	*major third,*	„ „	$\frac{30}{24} = \frac{5}{4}$
„ *Fa*	„	*fourth,*	„ „	$\frac{32}{24} = \frac{4}{3}$
„ *Sol*	„	*fifth,*	„ „	$\frac{36}{24} = \frac{3}{2}$
„ *La*	„	*major sixth,*	„ „	$\frac{40}{24} = \frac{5}{3}$
„ *Si*	„	*major seventh,*	„ „	$\frac{45}{24} = \frac{15}{8}$
„ *Do*	„	*eighth* or *octave,*	„ „	$\frac{48}{24} = 2.$

Besides these, we have the following intervals: from

La to *Do*	is called a	*minor third;*	measured by	$\frac{48}{40} = \frac{6}{5}$
Mi to *Do*	„	*minor sixth;*	„	$\frac{48}{30} = \frac{8}{5}$
Re to *Do*	„	*minor seventh;*	„	$\frac{48}{27} = \frac{16}{9}.$

Hence the Diatonic major scale will be represented thus—

Do	Re	Mi	Fa	Sol	La	Si	Do.
1	$\frac{9}{8}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$\frac{15}{8}$	2

Forming the intervals between the successive notes of this scale, by dividing each ratio by the preceding, we get

Do	Re	Mi	Fa	Sol	La	Si	Do.
$\frac{9}{8}$	$\frac{10}{9}$	$\frac{16}{15}$	$\frac{9}{8}$	$\frac{10}{9}$	$\frac{9}{8}$	$\frac{16}{15}$	

Here there are three distinct intervals: $\frac{9}{8}$ or the *major tone*; $\frac{10}{9}$ or the *minor tone*; $\frac{16}{15}$ or the *major semitone.*

Besides these, the interval between a major and minor third, represented by $\frac{5}{4} \div \frac{6}{5} = \frac{25}{24}$, is called a *minor semitone*; and that between a major and minor tone, represented by $\frac{9}{8} \div \frac{10}{9} = \frac{81}{80}$, is called a *comma.*

Of these, two major semitones are greater than a major tone, since $\frac{16}{15} \times \frac{16}{15}$ is greater than $\frac{9}{8}$; while two minor semitones are less than a minor tone, since $\frac{25}{24} \times \frac{25}{24}$ is less than $\frac{10}{9}$. A major and a minor semitone are equal to a minor tone, since $\frac{16}{15} \times \frac{25}{24} = \frac{10}{9}$.

In order to obtain perfect harmony the above ratios should be accurately maintained, whatever be the note we start from, or Key-note, as it is called. But a great number of key-notes are employed in music; and it is practically impossible, at least in fixed-toned instruments, like the piano or organ, to maintain these ratios strictly for all of them. Only one scale in such an instrument can be absolutely perfect. Compromise of some sort, therefore, becomes necessary; and different systems of compromise are called different

modes of temperament. The simplest mode of temperament, and the one most in favour now, is that which is called *equal temperament.* By this the octave is divided into twelve equal parts, called *mean semitones.* The difference between a major and minor tone (i.e. the comma) is ignored, and the mean semitone is exactly half of either.

By this division of the octave we have the following

Table of Intervals.

The mean	minor second	= 1	mean semitone.
„	major second	= 2	mean semitones.
„	minor third	= 3	„
„	major third	= 4	„
„	perfect fourth	= 5	„
„	perfect fifth	= 7	„
„	minor sixth	= 8	„
„	major sixth	= 9	„
„	minor seventh	= 10	„
„	major seventh	= 11	„
The octave		= 12	„

The difference between the tempered and natural scale of C is shown by the following table, which gives the number of complete vibrations per second for each note of the middle octave of the ordinary piano.

	Tempered Scale.	Natural Scale.
c Do	256	256
d Re	287.3	288
e Mi	322.5	320
f Fa	341.7	341
g Sol	383.6	384
$\bar{a}$ La	430.5	426
$\bar{b}$ Si	483.3	480
$\bar{c}$ Do	512	512

The c of the	Paris Conservatoire	is about	258.7.
„	Concert-pitch	„	269.
„	Italian opera	„	273.
„	Society of Arts	„	264.
„	Philharmonic Society	„	268.5.

The c of Handel is said to have been about 249.1.

The number of vibrations corresponding to any given note may he counted by an instrument called the Siren, a full description of which is given in 'Sound and Music,' by Sedley Taylor.

CHAPTER I.

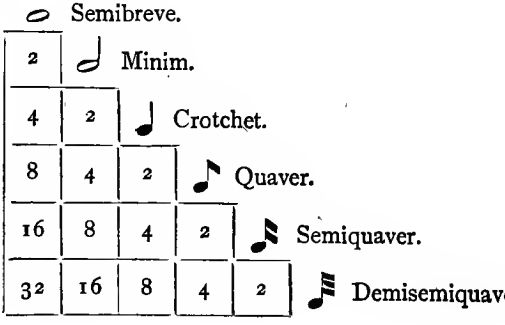
Notation.

13. The alphabet of music chiefly consists of characters called *notes*, which vary in form according to the relative duration of the sounds which they are used to represent.

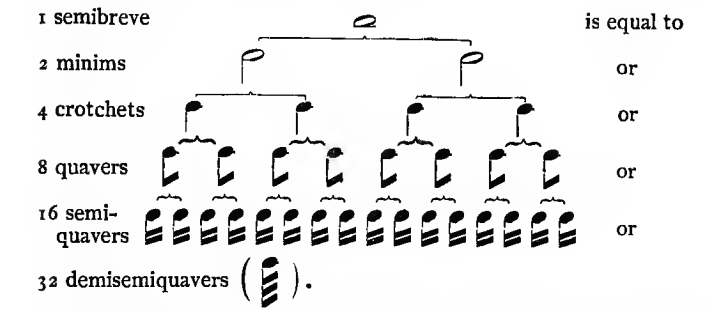
14. The number of notes in common use is six: viz.

1. *Semibreve*  , an open or white note.
2. *Minim*  , a note with an open or white head and a stem.
3. *Crotchet*  , a note with a close or black head and a stem.
4. *Quaver*  , a note with a close or black head, and a stem with one hook.
5. *Semiquaver*  , a note with a close or black head, and a stem with two hooks.
6. *Demisemiquaver*  , a note with a close or black head, and a stem with three hooks.

15. Each of these notes is twice as long as the note after it thus—



16. Or the comparative value of these notes may be represented in the following way:—



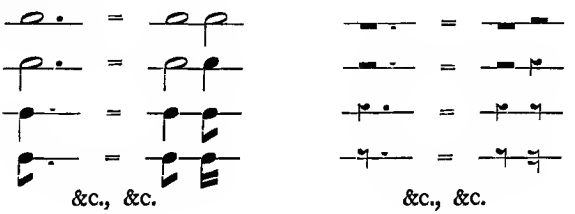
17. Sometimes, three notes (called a *triplet*) are performed in the time of two notes of the same value. Triplets generally have a curve and figure 3 placed over or under them, thus—

18. Other similar groups are found, also distinguished by a curve and figure indicating the number of notes to be played.

19. To each note there corresponds a character called a *Rest*, to represent an equal duration of silence.

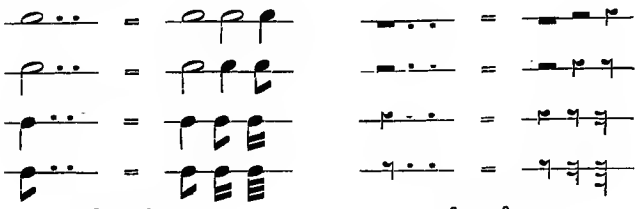
Semibreve rest	—▬—	*below* the line.
Minim rest	—▬—	*above* the line.
Crotchet rest	𝄽 or 𝄾	turned to the right.
Quaver rest	𝄿	turned to the left.
Semiquaver rest	𝅀	turned to the left.
Demisemiquaver rest	𝅁	turned to the left.

20. A dot placed after a note or rest makes it half as long again, thus—



&c., &c. &c., &c.

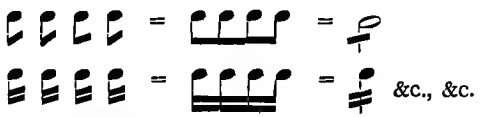
21. If a second dot is added, it lengthens the note or rest by half as much again as the first dot; i. e. by three-fourths altogether, thus—



22. When a note or rest is to be lengthened indefinitely, this character 𝄐, called a *pause*, is placed over or under it.

23. The stems of notes may be turned up or down: the stems of rests are always turned down.

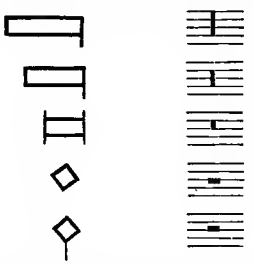
24. Hooked notes are frequently grouped or contracted, without alteration of their value, thus—



Rests are never grouped.

The notes and corresponding rests formerly used were as follows:—

1. Maxim (greatest)
2. Long
3. Breve (short)
4. Semibreve (half-short)
5. Minim (least)



The maxim and the long are out of use, although their corresponding rests, as well as the breve rest, are still found: the breve (now written thus 𝄽, or 𝄆𝄇) is rarely found except in ecclesiastical music; thus the semibreve (originally the shortest note but one) is the longest in modern use.

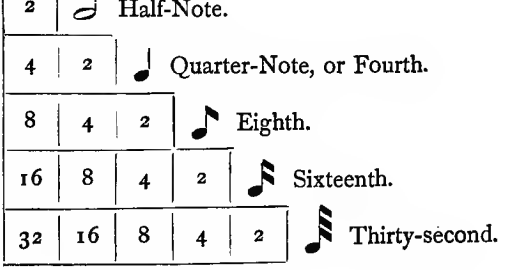
To these notes was afterwards added the crotchet, originally a hooked minim (French *crochet*, 'a hook'). When the crotchet took its present form, the hook was transferred to the quaver—a name derived from the Spanish *quiebro*, and connected with our own *quiver*, referring to the short duration of the note.

Shorter notes than the demisemiquaver, i. e. the semidemisemiquaver  , and the demisemidemisemiquaver  , are found in modern instrumental music. In vocal music even the demisemiquaver rarely occurs.

The French name the modern notes after their forms: the Germans after their relative durations.

FR.	Ronde. Round.	Blanche. White.	Noire. Black.	Croche. Hook.	Double croche. Double hook.	Triple croche. Triple hook.
						
GER.	Ganze note. Whole note.	Halbe note. Half-note.	Viertel. Fourth.	Achtel. Eighth.	Sechzehntel. Sixteenth.	Zwei-und-dreissigstel. Thirty-second.

25. It would be much easier to learn and understand the series of modern notes, if they were named after their relative durations, according to the German system. It is absurd that what is now our *longest* note should still be called a *semibreve*, i. e. *half-short*, and our longest note but one a *minim*, i. e. the *least* note. There is also an absurdity in applying the name *crotchet* (*hooked*) to a note which now has *no hook*. The table of notes would be as follows:—



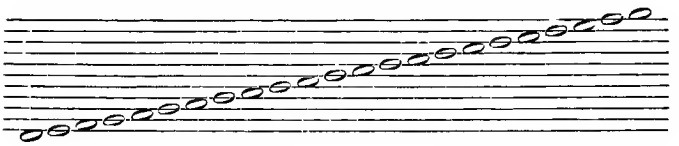
CHAPTER II.

Pitch.

26. The relative pitch of musical sounds is represented to the eye by the position of notes on or between certain parallel and horizontal straight lines, drawn across the paper from margin to margin. These lines are called the *Stave.*

27. Eleven lines are required to represent in a regular series the ordinary extent of the human voice, male and female.

This stave is called the *Great Stave of Eleven Lines.*



28. As no one human voice can execute the whole of the twenty-three sounds here represented, the great stave is subdivided into smaller staves of five lines each, which have been found practically sufficient for the average compass of each distinct species of voice.

29. The stave in ordinary use thus consists of five lines and four spaces, both lines and spaces being reckoned *upwards*, the lowest being the first.

Formerly the whole eleven lines were occasionally used; and sometimes eight, seven, six, four, or three. Sometimes the lines only, and not the spaces, were used.

30. But as the absolute pitch of a note cannot be determined by its position on the stave, it is necessary to fix the pitch of one particular note, from which the others may be reckoned; and to express it by a written character.

31. The sound produced by 256 double vibrations of an elastic body in a second is the one which has been taken as the starting-point; and it is represented by the character  or  , called a *clef* (French *clef*, a key), placed on the middle line of the great stave.

32. The sound fixed by this clef is the 'middle C' of the pianoforte.

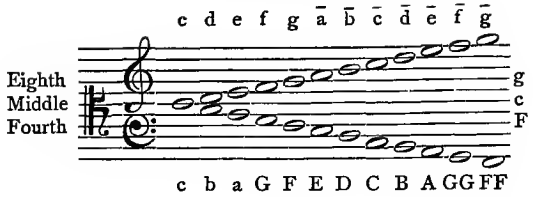
33. We have seen that five lines of the great stave are all that are generally required in writing for separate voices or instruments. It is obvious that in selecting the five adjacent lines to be used for the stave, we must be guided by a consideration of the place in the range of musical sounds of the notes we have to write.

34. Thus, if we are writing for voices or instruments of the lowest range, we must select the five lines at the bottom of the great stave.

These lines do not include the fixed sound C. It is therefore necessary to fix the pitch of some sound within the limits of this stave. The sound which is five degrees (or a *fifth*) *below* the fixed sound C is the one selected. It is called F, and is represented by the clef  or  , falling on the fourth line of the great stave.

35. So, if we are writing for voices or instruments of the highest range, we must select the five lines at the top of the great stave.

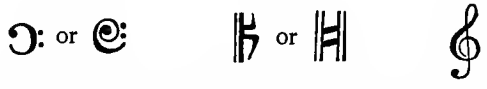
These lines do not include either of the fixed sounds C or F. It is therefore necessary to fix the pitch of some sound within the limits of this new stave. The sound which is five degrees (or a *fifth*) *above* the fixed sound C is the one selected. It is called G, and is represented by the clef  , placed so that the principal curl of it falls on the eighth line of the great stave, i.e. on the second of the five lines we are now using.



36. If we are writing for voices or instruments of medium range, neither of the above staves will be found convenient, the one being below and the other above the required range. Therefore we must select some other set of five lines, from the middle part of the great stave, suitable to our purpose.

37. Whichever set we select will include always two, and in one instance all three fixed sounds: and as we have already appropriated the clefs representing the highest and lowest staves respectively, and as it is not usual to place more than one clef on the same stave of five lines, it will conduce to clearness if we use the clef of the fixed sound C to distinguish our medium staves.

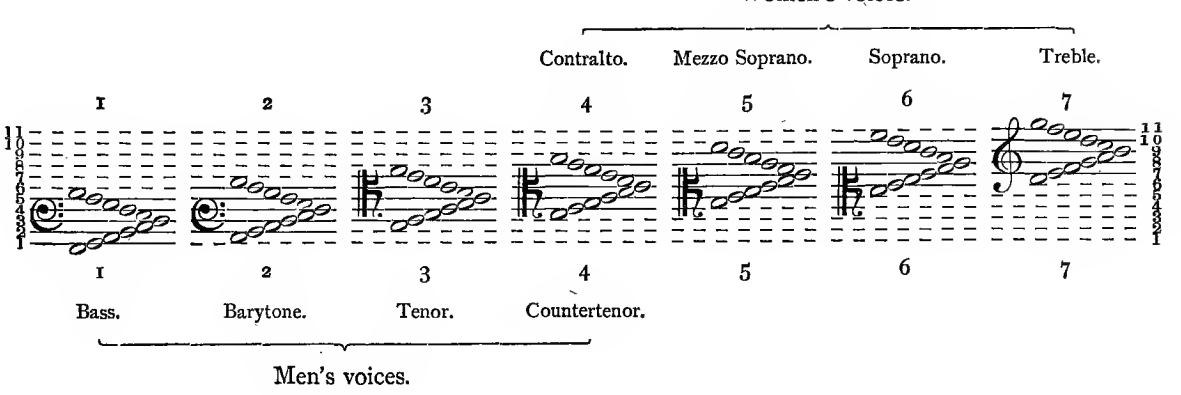
38. These clefs are called respectively



from the names of the sounds of which they determine the pitch.

39. And here let the student once for all remember that these three clefs never change from their positions on the fourth, sixth (or middle), and eighth lines respectively of the great stave. Any apparent change in their position is due to the selection of any particular set of five lines.

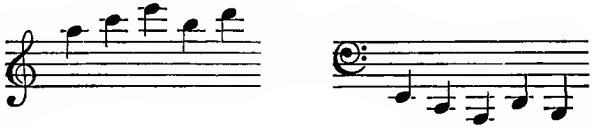
40. The following diagram will serve for an illustration:—


Women's voices.
Contralto.
Mezzo Soprano.
Soprano.
Treble.
1
2
3
4
5
6
7
Bass.
Barytone.
Tenor.
Countertenor.
Men's voices.

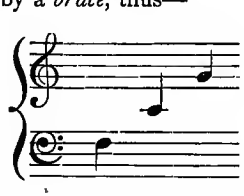
These seven different staves, of five lines each, are all that can be extracted out of the great stave.

Of these staves, the first, third, fourth, and seventh are most commonly used in modern music.

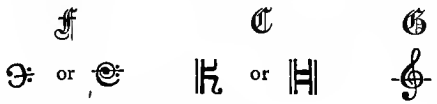
41. Should it be necessary to represent sounds higher or lower than the eleven which can be expressed on any stave of five lines, short lines, called *Leger* lines (French *leger*, 'light'), are added above or below the stave. These leger lines are in fact merely portions of the lines outside the stave in use, cut short for the sake of clearness in writing, to prevent confusion to the eye, thus—



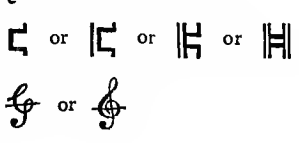
42. In writing for the pianoforte, or instruments of large compass, it is customary to use the whole stave of eleven lines, reducing the middle C to a leger line. Thus the great stave is reduced into two staves combined by a *brace*, thus—



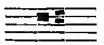
The forms of the clefs are perhaps corruptions of the old Gothic letters



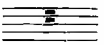
or of the old-fashioned F, C, and G, thus—



The figure  has also been supposed to be a corruption of three notes, one placed on the line of F, and two others in the adjoining spaces, thus—



The figure  has also been supposed to be a corruption of two notes, placed in the spaces above and below the line of C, thus—



The figure  has also been supposed to be a corruption of S (the initial letter of Sol) and G, combined, thus—

Of the clefs enumerated in the diagram (§ 40), No. 2, called the Barytone, is found in old vocal music; but is now practically obsolete. So too is No. 5, the Mezzo-soprano.

Anciently No. 6, the Soprano or Canto clef, was used for the highest kind of voices only, the G clef being reserved for instrumental music. The Soprano clef is still regarded as one of the regular clefs for choral counterpoint. In Italy and Germany this clef is used for pianoforte music, the Treble clef being reserved for the violin.

CHAPTER III.

Intervals and the Scale.

43. The difference in pitch between any two sounds is called the *interval* between them.

44. Intervals are reckoned upwards, unless the contrary be specified.

45. The interval between any two sounds is named from the number of degrees on the stave from the one to the other, including both.

Thus the interval from any sound to the sound next above or below it is called a *second*, two degrees of the stave being involved: from any sound to the sound four degrees distant from it is called a *fifth*; from any sound to the sound seven degrees distant from it is called an *eighth* or *octave*, and so on; there being theoretically no limit to this nomenclature.

46. As was said in the introductory chapter, two sounds at the interval of an octave, heard together, coincide so perfectly as to appear but one sound, and are represented by the same letter.

47. The intermediate sounds may be, and have been, arranged in various series called *scales* (Latin *scala*, 'a ladder').

48. Of the possible scales, only two forms are in modern use: the *Diatonic* (Greek διά, 'through,' and τόνος, 'a tone,' so called because it principally consists of tones), which divides the octave into eight sounds, or seven intervals; and the *Chromatic* (Greek χρῶμα, 'colour,' a word said to refer to the ink of different colour used to express altered notes, or to the different colours of the strings of the lyre), which divides the octave into thirteen sounds, or twelve intervals.

49. Each of the twelve intervals of the Chromatic Scale is called a *semitone*, which is the smallest unaltered interval recognised in modern music: and it is convenient to measure and compare all other intervals by the number of semitones they contain.

50. Two semitones make a tone.

It must be carefully borne in mind, that tones and semitones are intervals, and not isolated sounds, as their names imply.

51. The seven intervals of the Diatonic Scale are either tones or semitones, and there are twelve semitones in the octave; hence there must be five tones and two semitones in the Diatonic Scale.

For the harmonic derivation of the scale, we refer the student to Ouseley's Treatise on Harmony, Chapters iv to vii.

52. The first or lowest sound of the Diatonic Scale is called the *key-note* or *tonic*. Any note may be used as a tonic.

The fifth degree, which is next in importance to the tonic, is called the *dominant* (Latin *dominor*, 'I rule'), because it exercises the most powerful influence on the harmony.

The third degree is called the *mediant* (Latin *medius*, 'middle'), because it is half-way between the tonic and the dominant.

The fourth degree (i. e. the fifth *below* the octave), which is of almost equal importance with the dominant, is called the *subdominant.*

The sixth degree (i. e. the third *below* the octave) is called the *submediant*, lying half-way between the subdominant and the octave.

The seventh degree is called the *leading note*, as it naturally leads up to the octave.

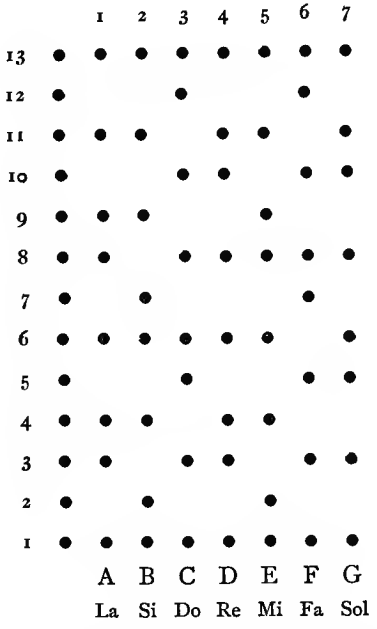
The second degree is called the *supertonic*, because it is next above the tonic.

Thus, in ascending order, the degrees of the scale are—

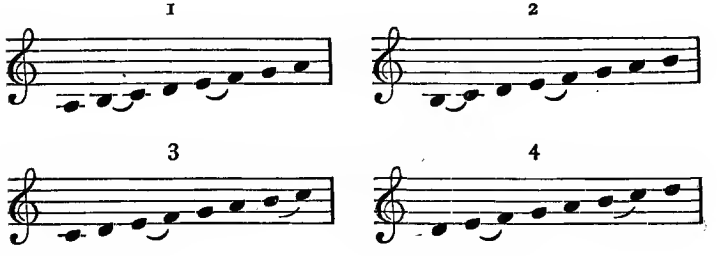
1. Tonic,
2. Supertonic,
3. Mediant,
4. Subdominant,
5. Dominant,
6. Submediant,
7. Leading-note.

53. The modes of the Diatonic Scale vary according to the position of the semitones, which are always at least two tones apart.

54. The following table represents the thirteen sounds of the Chromatic Scale (equal to twelve semitones), and the relative position of the tones and semitones in the seven possible modes of the Diatonic Scale.



55. The following table represents the relative positions on the stave of the same seven modes of the Diatonic Scale:—



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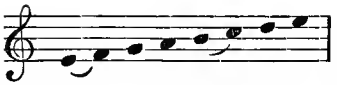


6

7

These, the old Ecclesiastical Modes, were named as follows, from a false assumption of their identity with the ancient Greek Modes.

1st mode, from A, the *Aeolian.*
3rd „ C, the *Ionian.*
4th „ D, the *Dorian.*
5th „ E, the *Phrygian.*
6th „ F, the *Lydian.*
7th „ G, the *Mixolydian.*

The 2nd mode, from B, has never been used.

Of these modes only two are ordinarily used in modern music, the first and third; the former, however, with modifications.

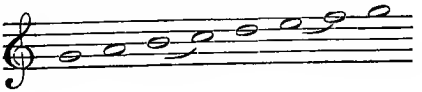
56. The third mode is called the *Diatonic Major Scale,* the intervals between the first and third degrees being a major third, containing four semitones, and between the first and sixth degrees a major sixth, containing nine semitones.

57. Upon this model scale of C major are formed all other diatonic major scales in use, whatever be their tonic or keynote.

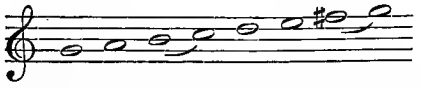
58. It will be observed that this model scale is divisible into two similar parts, each consisting of two tones and a semitone, and separated from each other by the interval of a tone.

59. Each of these parts is called a *tetrachord,* because it consists of four notes.

60. If the second or upper tetrachord of this scale of C be taken to form the first or lower tetrachord of a new scale whose tonic is G, a fifth above C, it will be found, on completing the scale, that the upper tetrachord does not correspond to the lower, as regards the relative position of the semitones.



61. In order to reduce this to the type form, it is necessary to raise the seventh degree of the new scale by a semitone. To represent this effect to the eye, a character ♯, called a *sharp*, is prefixed to the note, thus—

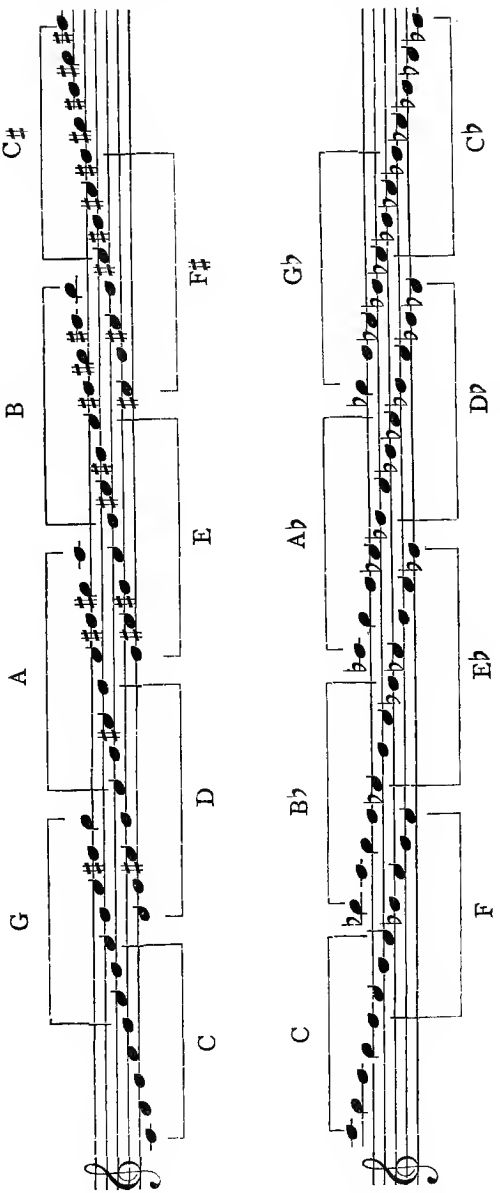


62. By proceeding in this way, we shall find that in every new scale formed by beginning with the upper tetrachord of the preceding one, it will be necessary to repeat the process of sharpening the seventh degree, the sounds sharpened *ascending* by fifths. This process can be carried on indefinitely; but in practice it is usual to stop at the seventh sharp.

63. Similarly, if the first or lower tetrachord of this model scale of C be taken to form the second or upper tetrachord of a new scale, whose tonic is F, a fifth below C, it will be found, on completing the scale, that the lower tetrachord does not correspond to the upper, as regards the relative position of the semitones.

64. In order to reduce this to the type form, it is necessary to lower the fourth degree of the new scale by a semitone. To represent this effect to the eye, a new character ♭, called a *flat*, is prefixed to the note, thus—

65. By proceeding in this way, we shall find that in every new scale formed by beginning with the lower tetrachord of the preceding one, it will be necessary to repeat the process of flattening the fourth degree, the sounds flattened *descending* by fifths. This process can be carried on indefinitely; but in practice it is usual to stop at the seventh flat: thus—


G
A
B
C♯
C
D
E
F♯
C
B♭
A♭
G♭
F
E♭
D♭
C♭

66. If we were to proceed one step further in each figure, it would be necessary to raise F and lower B by a second semitone, i. e. by a whole tone in each case. The characters used to denote this are × or 𝄪 (called a *double sharp*), and 𝄫 (called a *double flat*).

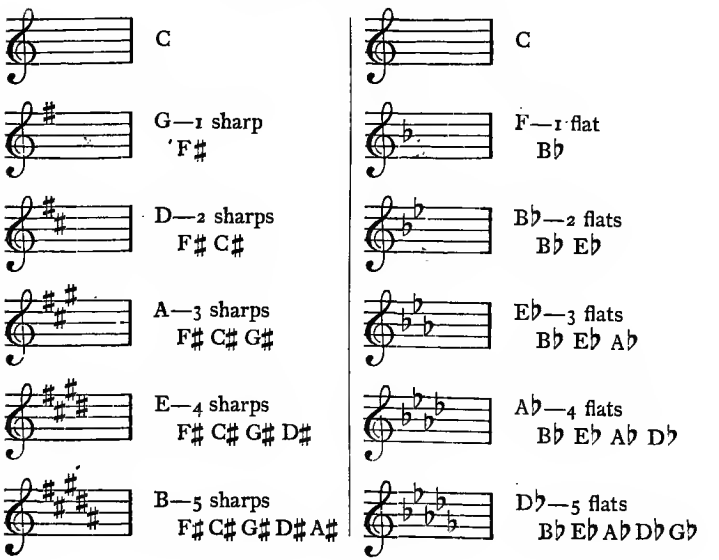
If it is required to restore a sharpened or flattened note to its original position, a character ♮ (called a *natural*) is employed. (See Chap. V.)

In old music the sharp was counteracted by the flat, and the flat by the sharp.

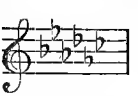
67. In order to avoid the constant recurrence of the prefixes of sharps and flats, musicians have agreed to place all the sharps or flats required in the formation of a scale at the beginning of each stave, immediately after the clef, placing them in the order in which they have been introduced, on the line or in the space on or in which the note to which they belong is placed.

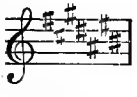
This is called the *key-signature.*

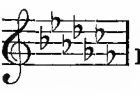
Table of Key-signatures.




F♯—6 sharps
F♯ C♯ G♯ D♯ A♯ E♯


G♭—6 flats
B♭ E♭ A♭ D♭ G♭ C♭


C♯—7 sharps
F♯ C♯ G♯ D♯ A♯ E♯ B♯

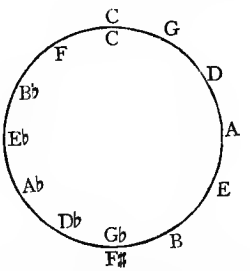

C♭—7 flats
B♭ E♭ A♭ D♭ G♭ C♭ F♭

68. A major key may be recognised from its signature by the following rules :—

1. The sharp last added marks the seventh or leading note.
2. The flat last added marks the fourth or subdominant.

69. On fixed-toned instruments the keys of F♯ and G♭ are identical; and also those of B and C♭; and those of C♯ and D♭. Hence on such instruments the complete cycle of scales will be twelve; whether we take six sharp keys, one natural, and five flat, or five sharp, one natural, and six flat.

70. Their completeness is exhibited in the following *circle of fifths* :—



If we class the key-notes according to their key-signatures, calling that one of two keys the sharpest which has the most sharps or fewest flats in its signature, we get the following list of notes :—

(B♯ E♯ A♯ D♯ G♯) C♯ F♯ B E A D G C F B♭ E♭ A♭ D♭ G♭ C♭ (F♭ B♭♭ E♭♭ A♭♭ D♭♭).

In this list any note is called sharper than all those to the right of it, and flatter than those to the left of it.

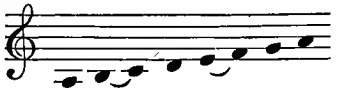
Thus C♯ is sharper than F♯, and flatter than G♯.

B♭ „ G♭, „ A.

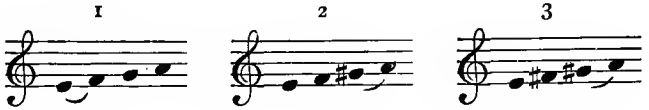
Also any accidental flat or sharp is said to be more or less remote from the key-note according to the order of its introduction. Thus the order from C is

C F♯ C♯ G♯ D♯ A♯ E♯ B♯
B♭ E♭ A♭ D♭ G♭ C♭ F♭.

71. The other mode of the Diatonic Scale (the first Fig. of § **55**) is called the *Diatonic Minor Scale*; the interval between the first and third degrees being a minor third, containing three semitones; and that between the first and sixth degrees a minor sixth, containing eight semitones.



72. In this mode it will be observed that the semitones occur between the second and third degrees, and between the fifth and sixth degrees: but the form of this scale is not invariable like that of the major; the upper tetrachord being found in at least three different forms :—

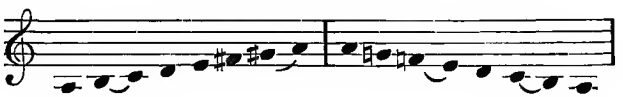


73. In the first of these, which belongs to that which we shall call the normal minor scale, the seventh degree is a tone below the eighth; but an ascending tetrachord, in which a semitone is not the last interval heard, leaves no impression of completeness on the ear.

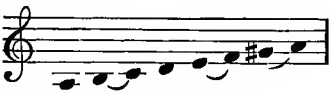
74. In ascending, therefore, the last sound but one of the upper tetrachord is usually raised a semitone: this gives us form No. 2; in which is an interval greater than a tone between the sixth and seventh degrees, belonging therefore to the Chromatic scale, and not to the Diatonic, in which tones and semitones alone occur.

75. To avoid this interval of three semitones, it is usual to sharpen the sixth as well as the seventh degree in ascending.

76. In descending, on the contrary, no sense of incompleteness prevents a return to the normal form of the minor scale.



77. It is not, however, improbable that the second or chromatic form is the natural form of the minor scale. (See Ouseley's Harmony, Chap. v, p. 66.)



It has these advantages over the others:—

1. The form is unaltered in ascent and descent.
2. It satisfies the modern ear by placing a semitone between the seventh and eighth degrees, and by making the third on the dominant major.
3. It leaves a minor interval from the tonic to the sixth degree; on the quality of which the distinctive mode of a scale depends almost as much as upon that of its third.

78. A major and a minor scale of the normal form, which consist of different arrangements of the same sounds (and which therefore require the same key-signature), are called *relative.*

A minor key may be distinguished from its relative major by the early introduction of the leading note as an accidental, and by the final cadence.

79. Thus A minor is the relative minor key to C major, its key-note A being on the sixth degree of the major scale of C; and similarly the relative minor key of any major key is that minor key whose tonic is on the sixth degree, or submediant, of the major key.

80. Conversely, C major is the relative major key to A minor, its key-note C being on the third degree of the minor scale of A; and similarly the relative major key of any minor key is that major key whose tonic is on the third degree, or mediant, of the minor key.

81. The following is a table of the relative major and minor keys, with their signatures. It will be seen that the minor key on any tonic has in its signature three sharps less, or three flats more, than the major key on the same tonic; and conversely.

Major keys, with sharps.		Minor keys, with sharps.	
7 sharps	C♯	7 sharps	A♯
6 sharps	F♯	6 sharps	D♯
5 sharps	B	5 sharps	G♯
4 sharps	E	4 sharps	C♯
3 sharps	A	3 sharps	F♯
2 sharps	D	2 sharps	B
1 sharp	G	1 sharp	E
Major natural key .	C	Minor natural key	A

Major keys, with flats.		Minor keys, with flats.	
Major natural key .	C	Minor natural key	A
1 flat	F	1 flat	D
2 flats	B♭	2 flats	G
3 flats	E♭	3 flats	C
4 flats	A♭	4 flats	F
5 flats	D♭	5 flats	B♭
6 flats	G♭	6 flats	E♭
7 flats	C♭	7 flats	A♭

82. The term *relative* is applied equally, whether the normal (§ **71**) or the natural (§ **77**) form of the minor scale be taken.

83. The relationship of keys depends partly upon the *number*, partly upon the *importance* (§ **52**), of the sounds they have in common.

84. There are three classes of relationship; viz.—

1. Between major keys and major keys.
2. Between minor keys and minor keys.
3. Between major keys and minor keys.

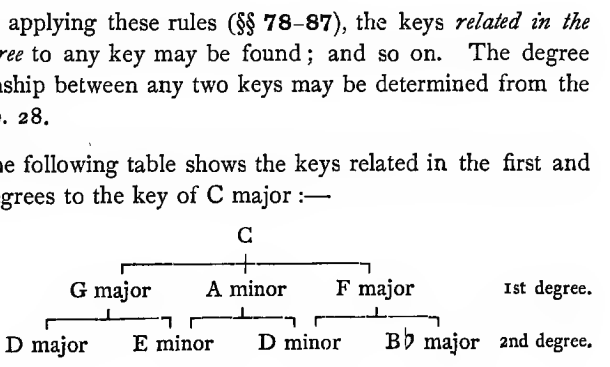
85. A major key is said to be *related in the first degree* to the major keys on its most important sounds, its dominant and its subdominant. These differ from it by only one sound.

86. A minor key is said to be *related in the first degree* to the minor keys on its most important sounds, its dominant and its subdominant. These differ from it by one or by three sounds, according as we take the normal or the natural form of the minor scale.

87. A major or a minor key is said to be *related in the first degree* to its relative minor or major key (§ **78**). These differ by no sounds or by one, according as we take the normal or the natural form of the minor scale.

88. By applying these rules (§§ **78–87**), the keys *related in the second degree* to any key may be found; and so on. The degree of relationship between any two keys may be determined from the table on p. 28.

89. The following table shows the keys related in the first and second degrees to the key of C major :—

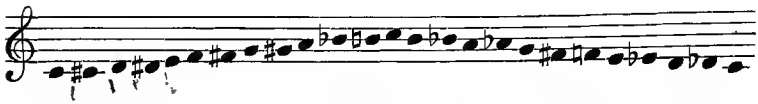


90. The following table shows the keys related in the first and second degrees to the key of A minor :—

	A minor			
E minor		C major	D minor	1st degree.
B minor	G major	F major	G minor	2nd degree.

91. The *Chromatic Scale* has already been said to divide the octave into twelve semitones.

It is usually written with sharps in ascending and flats in descending, with two exceptions, as shown in the following figure :—



Here, in the Chromatic scale of C, B♭ is preferred to A♯ in ascending, and F♯ to G♭ in descending, as being less remote from the key-note (§ **70**).

92. It has already been said (§ **49**) that intervals are most conveniently measured by the number of semitones which they contain.

93. Intervals are divided into *consonant* and *dissonant* intervals; or, as they are sometimes called, *concords* and *discords*; according as they leave upon the ear a sense of completeness or incompleteness.

94. Consonant intervals are of two kinds, *perfect* and *imperfect*; the perfection of an interval depending upon the simplicity of its ratio (§ **12**).

95. Imperfect consonant intervals are again subdivided into *major* and *minor*; the major containing one more semitone than the minor.

Perfect consonances cannot be so subdivided.

96. Dissonant intervals also, like the imperfect consonances, are either major or minor.

97. An interval is said to be *augmented* when it is increased by a semitone, whether by the elevation of the upper note or the depression of the lower.

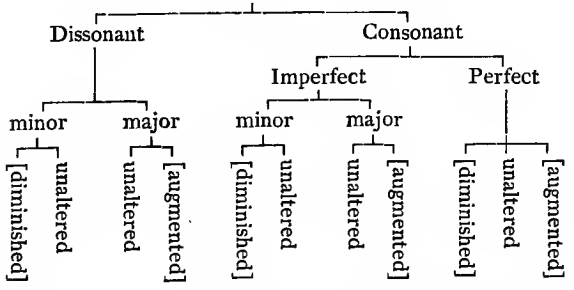
98. An interval is said to be *diminished* when it is decreased by a semitone, whether by the depression of the upper note or the elevation of the lower.

99. All intervals can be augmented or diminished, except that major intervals cannot be diminished, and that minor intervals cannot be augmented.

100. Perfect consonances alone can be both augmented and diminished.

101. All augmented or diminished intervals are called *Chromatic Dissonances*, and belong to the Chromatic Scale, except the two which occur in the Diatonic Scale, i. e. the augmented fourth or *tritone* (three tones) between the fourth and seventh degree, and the diminished fifth between the seventh degree and the fourth degree of the next octave.

102. The dissonant intervals are the second and seventh.
The imperfect consonant intervals are the third and sixth.
The perfect consonant intervals are the fourth, fifth, and octave.

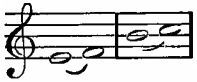


103. We here annex a table of the intervals in the Diatonic Scale in numerical order.

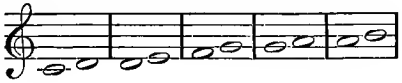
A minor second	contains	1	semitone.
A major second	„	2	semitones.
A minor third	„	3	„
A major third	„	4	„
A perfect fourth	„	5	„
An augmented fourth {involving four degrees of the scale.}	„	6	„
A diminished fifth {involving five degrees of the scale.}	„	6	„
A perfect fifth	„	7	„
A minor sixth	„	8	„
A major sixth	„	9	„
A minor seventh	„	10	„
A major seventh	„	11	„
A perfect octave	„	12	„

104. In the Diatonic major scale there are, if we include the next octave, till the intervals repeat themselves,—

Two minor seconds,

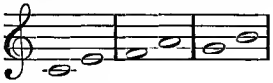


Five major seconds,

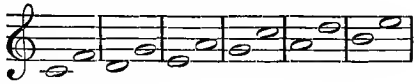


Four minor thirds,

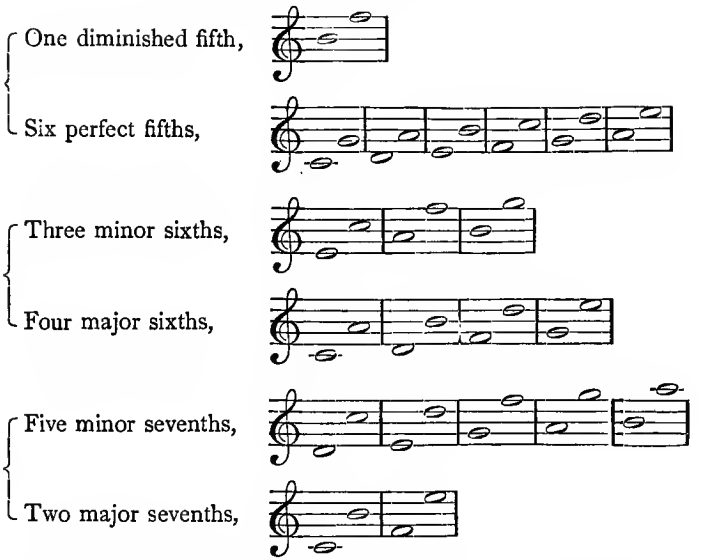
Three major thirds,



Six perfect fourths,

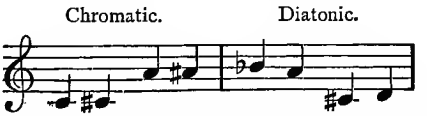


One augmented fourth,



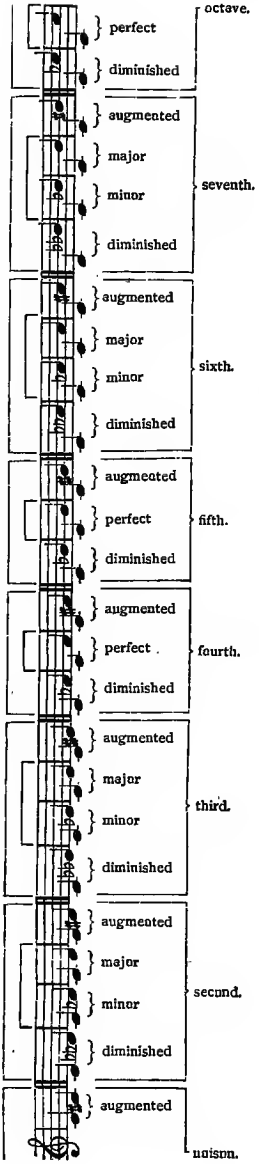
105. All intervals that are not augmented or diminished are called Diatonic intervals, because they are found in the Diatonic Scale: but the augmented fourth on the fourth degree, and the diminished fifth on the seventh degree of the Diatonic Scale, are reckoned among the Diatonic intervals.

106. Hence it will be seen that there are two kinds of semitone, Diatonic and Chromatic; the Diatonic involving two degrees of the stave, and therefore notes of different names; the Chromatic only one degree.

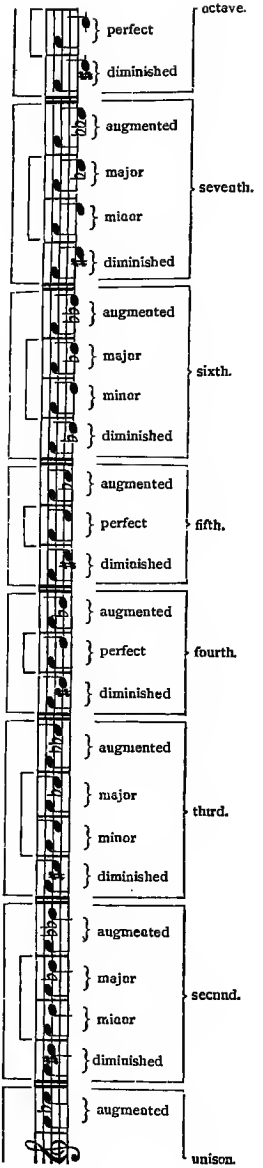


107. A full table of intervals is annexed; in which, for the sake of symmetry, is included the *unison* (the simultaneous production of the same sound by different instruments or voices), though not strictly speaking an interval.

TABLE OF INTERVALS.



THE SAME COUNTING DOWNWARDS.

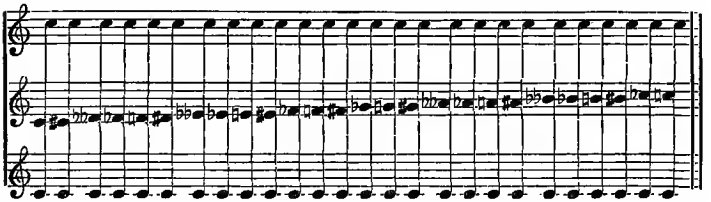


108. An interval is said to be *inverted*, when the under note is placed an octave higher, or the upper note an octave lower.

An interval beyond an octave cannot be inverted.

109. By inversion a different interval is produced by notes of the same name; a second will become a seventh, a third a sixth, a fourth a fifth, and so on; the sum of the degrees involved in any interval and its inversion always being nine.

110. It will also be seen by the subjoined table that the inversions of perfect intervals are perfect, of major are minor, of minor are major, of augmented are diminished, and of diminished are augmented.



CHAPTER IV.

Rhythm and Time.

111. A SINGLE musical sound is in itself pleasing to the ear; but a succession of musical sounds (i. e. a *melody*) depends for its meaning and effect on what is called *Rhythm.*

112. The primary element of Rhythm is the *regular recurrence of accent.*

113. The space between accent and accent is called a *foot.*

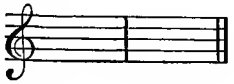
114. Two kinds of feet are found in modern music; consisting—

1. Of two beats, the first accented and the second unaccented, (– ∪);
2. Of three beats, the first accented and the second and third unaccented, (– ∪ ∪);

though sometimes by *syncopation* (§ **141**) the accent is thrown on to the weak part of the foot.

115. The length of one or more feet is represented to the eye by perpendicular straight lines drawn across the stave, called *bars*, or *bar lines*, so placed that an accented beat always falls immediately after each bar line: thus—

116. The end of a movement, or section of a movement, is generally marked by a double bar, which however has no effect upon the time :—



117. The notes between every pair of *single* bar lines make up what is called a *measure*, or sometimes also a *bar*.

118. All measures in the same movement are of the same value, i. e. take the same time to perform.

119. Time itself may be defined as the measurement of the spaces between accent and accent.

120. Hence there are two principal kinds of time, corresponding to the two kinds of feet;—

1. *Duple*, if there are two beats in a measure;
2. *Triple*, if there are three beats in a measure;

though very often two measures of duple time are joined together, thus giving us a third kind of time, called

3. *Quadruple*, with four beats in a measure;

in which the second accent is subordinated to the first.

121. Thus a measure is said to be in duple, triple, or quadruple time, according to the number of beats (two, three, or four) into which it may be divided.

122. According to the subdivision (duple or triple) of each beat, a measure is said to be in

1. *Simple* time, when each beat is a whole note, and therefore divisible by two;
2. *Compound* time, when each beat is a dotted note, and therefore divisible by three.

123. In a measure of simple time there is but one principal accent, viz. on the first beat: in a measure of compound time there often is, and always may be, a subordinate accent on the first note of the group belonging to each beat.

124. The number and value of the notes contained in each measure of a movement are shown by a time-signature, which is placed at the beginning immediately after the key-signature.

125. The unit of modern music being the semibreve (§ **14**), the time-signature is usually expressed as a fraction of a semibreve; the *denominator* showing the number of parts, or kind of notes,

into which the semibreve is divided; the *numerator* showing how many of these are contained in each measure.

126. A table of time-signatures is annexed:—

	Duple.	Triple.	Quadruple.
Simple.	¢ or $\frac{2}{2}$	$\frac{3}{2}$ 	¢ or $\frac{4}{2}$
	$\frac{2}{4}$ 	$\frac{3}{4}$ 	C or $\frac{4}{4}$ 
	$\frac{2}{8}$	$\frac{3}{8}$ 	$\frac{4}{8}$
Compound.	$\frac{6}{4}$ 	$\frac{9}{4}$ 	$\frac{12}{4}$ 
	$\frac{6}{8}$ 	$\frac{9}{8}$ 	$\frac{12}{8}$ 
	$\frac{6}{16}$ 	$\frac{9}{16}$ 	$\frac{12}{16}$ 

127. Of these, $\frac{4}{4}$, quadruple time, is so frequently found as to have acquired the name of common, and is denoted by the letter C. This, however, is not the initial letter of the word 'common,' but a corruption of the semicircle (by which the old masters marked imperfect or duple time, as distinguished from perfect or triple time, which they marked by a circle ◯.

128. In ancient music $\frac{4}{2}$ time was denoted by C; which in modern music denotes $\frac{4}{4}$ time. A bar through the C, thus—¢, indicated either that the measure, or that the value of the notes in the measure, marked by C, was to be halved.

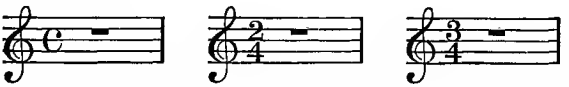
$\frac{4}{2}$ time, containing one breve in the measure, was called *Alla Breve* (measured by the breve), a term now often applied to $\frac{2}{2}$ time; while $\frac{4}{2}$ is often called *double common.*

129. In ancient music, besides the above-mentioned time-signatures, the following are found:—

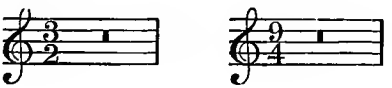
	Duple.	Triple.	Quadruple.
Simple	$\frac{2}{1}$ 𝅗𝅥 𝅗𝅥	$\frac{3}{1}$ 𝅗𝅥 𝅗𝅥 𝅗𝅥	$\frac{4}{1}$ 𝅗𝅥 𝅗𝅥 𝅗𝅥 𝅗𝅥
Compound	$\frac{6}{2}$ 𝅗𝅥. 𝅗𝅥.	$\frac{9}{2}$ 𝅗𝅥. 𝅗𝅥. 𝅗𝅥.	

Occasionally anomalous kinds of time are found, which divide the measure into five or seven notes of equal value. The most usual of these is

130. If a measure contains not more than the value of a semibreve, the semibreve rest is always used to denote silence during the measure, thus—

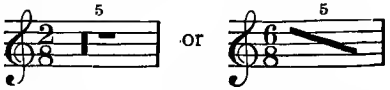


But if the measure contains more than the value of a semibreve, a breve rest is used:—

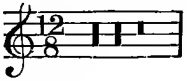


131. A rest of several measures is written thus :—

1. If the measure contain not more than the value of a semibreve—



2. If the measure contain more than the value of a semibreve,



will denote a rest of five measures.

132. The time-signatures in general use are plainly unsatisfactory, especially in the signatures of the so-called compound time, which express merely the number of the notes in each measure, but not their rhythmical grouping. Thus $\frac{12}{4}$ strictly states that there are twelve crotchets in a measure, but gives no idea how they are grouped.

A very simple alteration of the time-signatures would remove this defect; if, just as each note is dotted in any compound time, so a dot were placed after the denominator in the corresponding simple time.

Thus, while $\frac{4}{4}$ denotes 

let $\frac{4}{4.}$ denote

The table of time-signatures will, on this principle, be reduced to the following simple form :—

	Duple.	Triple.	Quadruple.
Simple.	$\frac{2}{2}$ $\frac{2}{4}$ $\frac{2}{8}$	$\frac{3}{2}$ $\frac{3}{4}$ $\frac{3}{8}$	$\frac{4}{2}$ $\frac{4}{4}$ $\frac{4}{8}$
Compound.	$\frac{2}{2.}$ $\frac{2}{4.}$ $\frac{2}{8.}$	$\frac{3}{2.}$ $\frac{3}{4.}$ $\frac{3}{8.}$	$\frac{4}{2.}$ $\frac{4}{4.}$ $\frac{4}{8.}$

133. The regular recurrence of accent, however, is not the only element of rhythm.

134. Just as the combination of beats forms the foot, so the combination of feet forms the *phrase*, a higher group than the foot, presenting a certain degree of definiteness in itself.

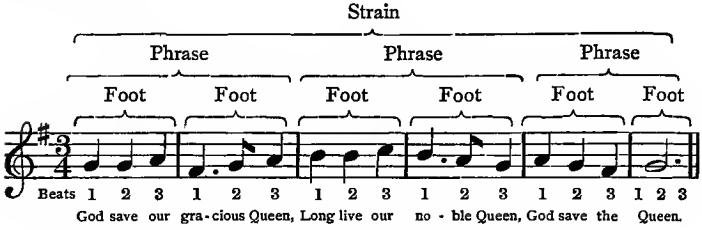
135. Every phrase has as many accented parts as it has feet: but, *in addition* to these, it often has a special stress introduced upon a note or notes which by the rhythm may or may not be accented.

136. This special stress is called *emphasis*, and is indicated by a mark of this form $<$ or $\wedge$, or the letters *sf* or *sfz* (*sforzato*, 'forced'), placed over or under the emphatic note or notes.

137. A phrase cannot consist of less than one foot, and rarely consists of more than four, except by the accidental prolongation of an emphatic note; and it may commence, and therefore end, on either the strong or the weak part of the measure.

138. Again, the combination of phrases forms a *strain* or *period*, which may be defined as the expression of a complete musical idea.

139. As an illustration of these terms, let us take the National Anthem, 'God save the Queen.' It consists of two periods or strains; the first consisting of three phrases, the second of four phrases. Each phrase consists of two measures, and each measure of three beats.



The student should divide the second strain similarly.

CHAPTER V.

140. In music, beside notes, several characters and words are used as signs and abbreviations, or to mark expression, pace, intensity, and style, of which a complete list will be found in West's or Hamilton's Dictionaries.

141. The following are some of the most important.

Signs and Abbreviations.

 G clef (§ **35**): probably a corruption of a capital G.

 or  C clef (§ **31**): originally an old-fashioned square C. 

 F clef (§ **34**): probably distorted from an old-fashioned F.

♯ A *sharp*; used to raise any sound by a semitone.

♭ A *flat*; used to lower any sound by a semitone.

♮ A *natural*; used after a ♯ or ♭ to restore a sound to its original position.

× or ♯♯ A *double sharp*; used to raise any sound by two semitones.

♭♭ A *double flat*; used to lower any sound by two semitones.

♮♮ A *double natural*; used after a × or ♭♭, to restore any sound to its original position.

𝄪 A character used after a double sharp, to reduce it to a single sharp.

𝄫 A character used after a double flat, to reduce it to a single flat.

Sharps and flats not contained in the key-signature are called *accidentals*; and an accidental in any measure is in theory supposed to affect the *first* note of the next measure, if it is the same.

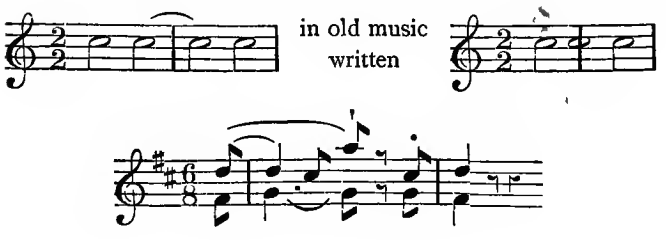
In Germany the syllables *is* and *es* affixed to a letter show that the note is sharpened or flattened: thus *Fis* denotes F♯, and *Des* D♭.

A *dash* placed over a note shows that the note so marked is to be played shortly and crisply, or *staccato* (cut off).

A *dot* placed over a note shows that it is to be played somewhat less shortly, or *mezzo-staccato.*

The *slur* placed over or under two or more notes of different pitch shows that the passage is to be played smoothly, or *legato* (bound together), or to be sung to one syllable.

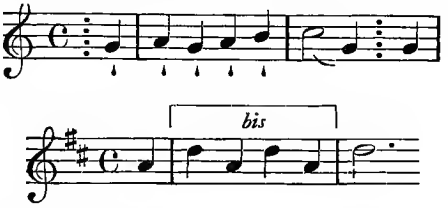
The *tie* or *bind,* placed over or under two notes of the same pitch, shows that the sound of the first note is to be sustained during the time of both; in other words, it binds two notes into one. The *first* is generally an *unaccented* note, and often the last note of a measure. The resulting disturbance of the accent is called *syncopation* (cutting) from the old method of dividing the note by a bar.



 A *pause* over or under a note or rest, shows that it may be prolonged *ad libitum*.

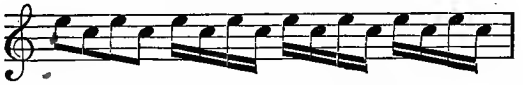
 The *direct* is generally used at the end of a line at the bottom of a page, to show what note is coming.

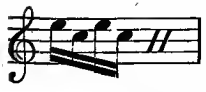
 or  or *bis*. When a passage is to be repeated, it is enclosed between dots, and sometimes also double bars; or sometimes the word *bis* (twice) is placed over it. A double bar strictly denotes the end of a strain (as in 'God save the Queen,' § **139**).



 or  The *sign* is another mode of showing the beginning of a passage to be repeated, and it is referred to at the end by the words *Dal Segno*, or *D.S.* (from the sign). When the repetition is to be made from the beginning of a movement, the words *Da Capo*, or *D.C.* (from the beginning) are used.

 This grouping of the stems of minims like those of quavers, or notes of smaller value, is an abbreviation for the following—



 This sign denotes that the last group of notes is to be repeated.

 This sign denotes that the whole preceding measure is to be repeated. The word *simili* is sometimes added.

1^{ma} *volta.* *First time.* } When on repetition any measures are
2^{da} *volta.* *Second time.* } to be left out, the words 1^{ma} *volta* are placed over them, and 2^{da} *volta* over those to be played in their place.

8^{va} . . . . . This sign, placed over treble notes, shows that they are to be played an octave higher, till the word *loco* (place) occurs.

8^{va} *sotto* . . . . . This sign, placed under bass notes, shows that they are to be played an octave lower, till the word *loco* occurs.

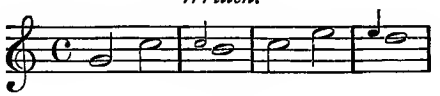
8^{vi}. . . . or *con* 8 . . . . This sign, placed over or under notes, shows that they are to be played with the octave above or below them respectively.

142. Graces.

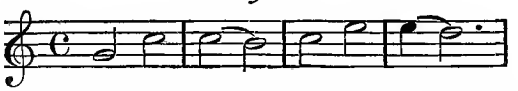
The chief graces are as follows :—

The *appoggiatura* (Italian *appoggiare*, 'to lean upon') is a small note placed on the accented part of a measure, before another of greater, usually of double, value; from which it borrows the accent and the value which it represents.

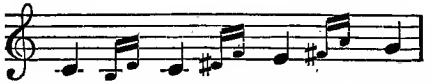
Written.



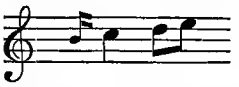
Played.



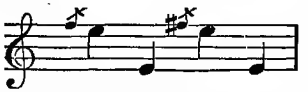
The *acciaccatura* (Italian *acciaccare*, 'to hammer') consists of two small notes at an interval of not more than a minor third from each other, placed before another, and performed as quickly as possible.



The *beat* is a short acciaccatura, consisting of its first note only, a semitone below any note, to which it gives special force.



The *twitch* is a short acciaccatura consisting of its latter note only, and is written thus—



The *turn* is a group of notes consisting of one principal note and the notes next above and below it.

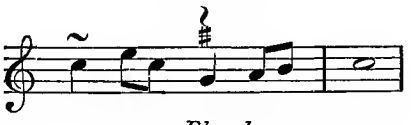
The *direct turn* ∼ begins with the note above.

The *inverted turn* ≀ begins with the note below.

A ♯ or ♭ above or below the turn shows that the note above or below the principal note is to be sharpened or flattened.

The mode of performance of the turn varies according to its position over a note, or between two notes: thus—

Written.



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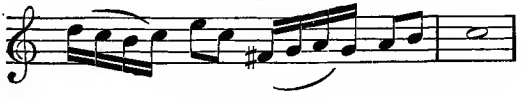
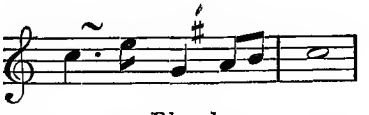


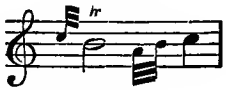
Written.



Played.

The *shake*, denoted by *tr* (a contraction for Italian *trillo*, 'a shake'), is a rapid alternation of the note over which it is placed, and the next note above, the accent being always placed on the upper note, thus—

Written.



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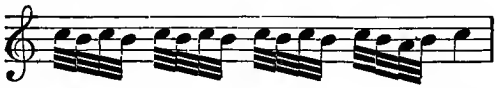


The shake, unless it be a very short one, ought to end with a turn.

The *trill*, denoted by *tr* placed over a note, is a very short shake.

Written. *Played.*

The *arpeggio* (Italian *arpa*, 'a harp'), denoted by (or } placed before a chord, shows that the notes of the chord are to be played consecutively, beginning with the lowest, instead of simultaneously.

143. Words relating to Pace, Intensity, and Style.

As it is impossible to give a complete list of these here, a few only of the most important are mentioned.

144. 1. *Pace.*

Grave, grave and solemn.
Lento, slow.
Largo, broad and majestic.
Larghetto, not so slow as *Largo*.
Adagio, leisurely.
Andante, going at a moderate pace.
Andantino, not so slow as *Andante*.

Allegretto, not so fast as *Allegro.*
Allegro, merry and lively.
Presto, quick.
Prestissimo, very quick.

N.B. *Andantino* being the diminutive of *Andante*, its relative meaning depends on the sense given to *Andante.*

The words above are subject to modification by the addition of other terms, of which the following is a list:—

Accelerando (*accel°*), accelerating the pace.
Rallentando (*rall°*), slackening.
Stringendo (*strin°*), pressing onwards.
Più mosso, more moved.
Ritardando (*ritar°*), retarding.
Ritenuto (*riten°*), holding back.
A tempo, in time (after an *accel°* or *rall°*).
In istesso tempo, in the same time (i. e. the beats to be the same, whatever the forms of the notes).
Alla Breve, by the breve (i. e. the breve being regarded as the unit, each beat being a minim).
Tempo Ordinario, in ordinary time } neither too fast
Tempo Commodo, in convenient time } nor too slow.

An exact measure of the time of notes is afforded by an instrument called Maelzel's Metronome.

This consists of a pendulum, with a sliding regulator attached, swinging in front of an index graduated usually from 50 to 160. By placing the regulator against any number on the index, the pendulum can be made to oscillate that number of times in a *minute.*

A composer, then, need only indicate at the beginning of each movement how many of the note which represents a beat are to go to the minute. Thus

M.M. ♩ = 60

denotes that there are to be sixty crotchet beats to the minute, i. e. one to the second.

145. 2. *Intensity.*

Piano, pia., p, soft.
Mezzo-piano, mp, rather soft.
Pianissimo, pp, very soft.
Forte, for., f, loud.
Mezzo-forte, mf, rather loud.
Fortissimo, ff, very loud.
Crescendo, cres., or  , increasing (in loudness).
Decrescendo, decres., or  , decreasing (in loudness).

To the above may be added—

Forte piano, fp, loud and instantly soft.
Sforzato, sf, forced (of single notes).
Rinforzando, rf, forcing (of passages).
Calando, descending
Perdendosi, losing itself
Diminuendo, diminishing
Smorzando, extinguishing
} decreasing in speed, and generally also in intensity.
Dolce, soft.

146. 3. *Style.*

Agitato, agitated.
Animato, animated.
A poco a poco, by degrees.
Assai, sufficiently.
Ben, well.
Brillante, brilliant.
Con, with.
Con Brio, with mirth.
Con Espressione, with expression.
Con Fuoco, with fire.
Con Moto, with motion.
Con Tenerezza, with tenderness.
Espressivo, expressive.
Giusto, exact.
Grazioso, graceful.

Legato, bound together.
Ma, but; e. g. *ma non troppo*, but not too much.
Maestoso, majestic.
Marcato, marked.
Molto, much, very.
Meno, less; e. g. *meno presto.*
Mezzo, half.
Moderato, moderate.
Non, not.
Più, more; e. g. *più animato.*
Poco, little.
Quasi, as though.
Segue, it follows.
Sempre, always; e. g. *sempre ff.*
Sostenuto, sustained.
Staccato, cut off.
Tenuto, held, sustained.
Vivace, lively.
Volti, turn.

APPENDIX.

QUESTIONS FOR EXAMINATION.

[Many of the Questions here given can be varied at discretion. The numbers in all cases refer to the Sections.]

INTRODUCTION.

1. What is the cause of sound?

2. Distinguish between musical and unmusical sounds.

3. In what ways do musical sounds differ from each other?

4. What is meant by the intensity of a sound? Upon what does intensity depend?

5. What is meant by the character of a sound? Upon what does character depend?

6. Give the names of the different kinds of human voices, male and female.

7. How may musical instruments be classified? Give the names of some instruments in each class.

8. What is meant by the pitch of a sound? Upon what does pitch depend?

9. What is the lowest limit of musical sound?

10, 11. What is the octave of any given sound? Why is it so called?

12. By what letters are the sounds of the Diatonic scale denoted? Name the corresponding syllables that are used, and give their origin.

CHAPTER I.

13. Why do notes vary in form?

14. Give the number and names of the notes in common use.

15, 16. Give a table of the relative durations of notes.

17. What is a triplet? How is it expressed?

18. Give examples of other similar groups.

19. What is meant by a rest? Give a table of rests.

20. What is the effect of a dot placed after a note, a rest, or another dot?

20, 21. Express in other ways the value of  , and  ,  .

22. What is a pause? What effect has it upon a rest?

24. Group the following notes:—three quavers, three demisemiquavers.

25. What are the objections to the existing method of naming the series of notes? Give a table of notes arranged after the German system.

CHAPTER II.

26. What is a stave? What is its use?

27. Why are there eleven lines in the great stave?

28. How many lines are there in the staves in ordinary use? Give your reason.

29. In what order are the lines and spaces reckoned? How many sounds can be represented on staves of four, six, or eight lines?

30, 31, 32. What is the use of clefs? Whence is their name derived? What sound is represented by the note on the middle line of the great stave? What clef is used to denote it?

33. On what principle are the staves in use selected from the great stave?

34, 35. Why are the F and G clefs introduced? Where are they respectively placed?

36, 37. Which of the three clefs is used on staves which are selected from the middle of the great stave? Give your reason.

38. Form the three clefs. How do they get their names?

39. Why do clefs sometimes appear to change their position on staves of five lines?

40. How many different staves of five lines can be extracted from the great stave? Which of these are most commonly used?

Draw the stave, with its clef, which you would use in writing for a soprano voice, for a countertenor, or for a barytone.

41. What is the use of leger lines? What does their name mean?

42. In pianoforte music, what modification of the great stave is used?

CHAPTER III.

43. Define an interval.

44. In which direction are intervals reckoned?

45. On what principle are intervals named? Give instances.

47. What is a scale?

48. What is the diatonic scale? What is the chromatic scale? How may their names be derived? Into how many intervals do they respectively divide the octave?

49. Define a semitone.

50. Distinguish between a tone and a note.

51. What is the necessary proportion of tones and semitones in the diatonic scale?

52. Give the names, with their meanings, of the sounds of the diatonic scale in ascending order.

53. How is the relative position of the semitones limited in the diatonic scale?

54. How does this limitation affect the number of possible modes of the diatonic scale?

55. Which of these are ordinarily used in modern music without alteration?

56–59. What are the special characteristics of the diatonic major scale?

Define a tetrachord.

60–66. Show how the succession of scales leads to the introduction of sharps and flats.

From the scale of D deduce those of A and G, from the scale of C♯ those of G♯ and F♯, and from the scale of C♭ those of F♭ and G♭.

67. What is meant by the key-signature? Give the key-signatures of C, C♯, C♭, B and B♭.

68. How may a major key be recognised from its signature?

71. What are the special characteristics of the diatonic minor scale?

72. What variations are found in the upper tetrachord?

73–76. Why are the sixth and seventh degrees of the minor scale sharpened in ascending?

77. What are the advantages of the so-called natural form of the minor scale?

78–81. What is meant by the relative minor of any major key? What are the relative positions of their tonics? What are the tonics of

the minor keys whose signatures are three sharps, one flat, and four flats? Name their relative majors.

83. On what does the relationship of keys depend?

84. What are the classes of relationship of keys?

85–87. To what keys is any major or minor key related in the first degree?

88. To what keys is any key related in the second degree?

89, 90. Make a table of the keys related in the first and second degrees to A major and C minor.

91. On what principle is the chromatic scale usually written? Write it ascending and descending in the key of A.

92. How are intervals usually measured?

93. Distinguish between consonant and dissonant intervals.

94, 95. How are consonant intervals divided?

96. How are dissonant intervals divided?

97, 98. Explain the terms 'augmented' and 'diminished' as applied to intervals.

99, 100. What restrictions are there upon the augmentation and diminution of intervals?

101. Explain the term 'chromatic dissonances,' and give the reason for the name. Is the tritone a chromatic dissonance?

102. Give a table of intervals, consonant and dissonant.

103. What intervals contain respectively three, six, and nine semitones?

104. Including the next octave, how many minor thirds, augmented fourths, perfect fifths, and major sixths, are there in the diatonic scale?

105. Distinguish between chromatic and diatonic intervals. Which of the diminished intervals belongs to the latter?

106. Write down two diatonic and two chromatic semitones, commencing with F.

107. Commencing with G, write a diminished second, an augmented third, a perfect fourth, and a major seventh, both ascending and descending.

108. What is meant by the inversion of intervals?

109, 110. What are the inversions of the augmented fourth, the perfect fifth, the major sixth, the minor third, and the diminished seventh?

CHAPTER IV.

111. What is a melody? On what do its meaning and effect chiefly depend?

112. What is the primary element of rhythm?

113. What is a foot in music?

114. How many kinds of feet are found in music? Name them. What is syncopation?

115. What is a bar? What is its usual position with reference to the accent?

116. What is the meaning of a double bar?

117. Distinguish between a bar and a measure.

119. How may time in music be defined?

120, 121. What are the principal kinds of time? How many beats are there in a measure of each?

122. Distinguish between simple and compound time.

123. When may there be more than one accent in a measure?

124. What is the meaning of the time-signature?

125. Explain the principle upon which the time-signatures are constructed?

126. Group six quavers in a single measure of different kinds of time, giving their proper signatures. Distinguish between $\frac{3}{2}$ and $\frac{6}{4}$ time, $\frac{6}{4}$ and $\frac{12}{8}$.

127. What is the meaning of the usual signature of what is called common time?

128. Distinguish between C time and ¢ time. Why is *alla breve* time so called?

129, 130. What rest would you use to denote silence during a whole measure of $\frac{3}{4}$, $\frac{5}{4}$, and $\frac{9}{4}$ time?

131. How would you denote a rest of six measures in $\frac{6}{8}$ and $\frac{9}{2}$ time?

132. Suggest a simpler method of denoting compound time than that in common use.

What time-signature would denote a measure containing two dotted crotchets?

134. What is a phrase in music?

135. What is the difference between accent and emphasis?

136. How is emphasis denoted?

137. What are the usual limits to the number of feet in a phrase? Are these ever exceeded?

138. What is the name given to a combination of phrases?

139. Divide the second strain of 'God save the Queen' into phrases and feet.

CHAPTER V.

141. Give the forms, and probable origin, of the three clefs.

Explain the following signs :—

$\sharp$, $\flat$, $\natural$, $\times$, $\mathbf{f}^{\bullet}$, $\mathbf{f}^{\bullet}$, $\mathbf{f}^{\bullet}$, w, $\mathbf{S}^{\bullet}$.

What are the different marks for repetition of passages?

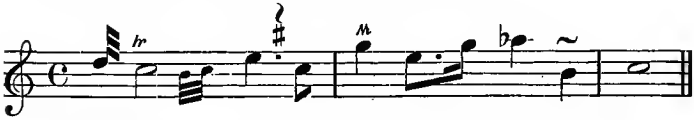
Distinguish between a slur and a tie.

Distinguish between 8^{va} and 8^{vi}.

142. Distinguish between the appoggiatura, the acciaccatura, the beat, and the twitch.

Give the signs for a turn, direct and inverted.

How would the following passage be played?



Write it out at length.

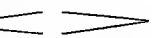
143. Distinguish between *Andante* and *Andantino*, *Largo* and *Larghetto*, *Allegro* and *Allegretto*.

Explain the use of the terms *a tempo*, *in istesso tempo*.

Which is the fastest of these three times—

M.M. $\mathbf{f}^{\frown}$ = 60, M.M. $\mathbf{f}$ = 100, M.M. $\mathbf{f}^{\bullet}$ = 70?

Explain accurately the meaning of these expressions.

145. Explain the meaning of *f*, *p*, *fp*, *sf*, *rf*, 

146. Explain the terms *legato*, *staccato*, *assai*, *giusto*, *molto*, *meno*, *segue*, *volti*.

MISCELLANEOUS QUESTIONS.

[The numbers here used do not refer to the sections.]

1. Why is F sharpened in the scale of G? and why is B flattened in the scale of F?

2. Write middle C with each clef.

3. How many tones are there in the octave?

4. In what order are the sharps and the flats added in going the round of the keys?

5. What are the intervals, counting upwards, between C and E, C and G, F and B, F and B flat, B and F, B and E?

6. Group twenty-four semiquavers in three different ways, with proper time-signatures.

7. Group sixteen dotted crotchets in two different ways, with proper time-signatures.

8. Write, with the most convenient clef, CC, G, $\bar{g}$, d, D, $\bar{\bar{c}}$, a.

9. Write with the treble clef, e, g, a, f, d, B, A, and also with the alto and tenor clefs.

10. For the semibreve rest write down other three rests equivalent.

11. Express the duration of two crotchets by five notes, and by three notes and a rest.

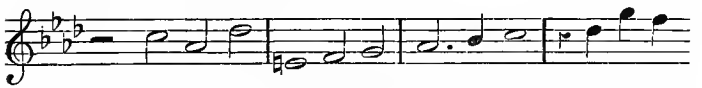
12. Write the key-signatures of three of the scales with sharps, and of three of those with flats, with the alto and the bass clefs.

13. Transpose the example at the bottom of p. 44 into the key of G, and write it with three clefs.

14. Write the melody of 'God save the Queen' in the key of A flat, using the tenor clef.

15. Write all the minor intervals in the keys of G and E flat, using accidentals.

16. Name every interval in succession in the following passage, and the key, and insert the time-signature—



17. Transpose this passage into a minor key related in first degree to the original key.

18. What is the leading note of the key of C flat? What is its submediant?

19. Explain the terms *Allegro ma non troppo*, *Adagio assai*, and the meaning of the signs 𝄫, 𝄪, *Da Capo*, *D. S.*

20. In four-part songs for S. A. T. B., written with their proper clefs, how far do the four staves overlap each other?

INDEX.

The numbers in all cases refer to the Sections.