

**A TREATISE ON THE SCIENCE OF
MUSIC, EXPLAINING ITS PRINCIPLES
IN A MANNER SUITABLE TO THE
PURPOSES OF GENERAL
EDUCATION. BY AN AMATEUR**

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A Treatise on the Science of Music, Explaining Its Principles in a Manner Suitable to the Purposes of General Education. By an Amateur by Anonymous .

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ANONYMOUS .

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ON
THE SCIENCE OF MUSIC,

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AN AMATEUR.

"Untwisting all the chains that tie
The hidden soul of Harmony."

MILTON.

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P R E F A C E .

AN acquaintance with the Science of Music, that is, with the principles of the system on which the constituent sounds of any air or piece of music, and the successions and combinations of those sounds, depend, is not, in this age and country at least, a very ordinary acquisition. Yet its importance to the very numerous class of musical performers is unquestionable; and even to others it may be reasonably recommended, as a graceful branch of general education; indispensable as it is to the power of fully appreciating the works of the great masters, and to the formation of a critical judgment and a true taste with regard to musical compositions in general. Its rarity is attributable, in some degree, to the peculiar dryness and difficulty by which the study of this science is found to be attended. The Author indulges the hope, that the amount of these discouragements will in the present work be diminished, by the attempt made to give the reader a better insight than he elsewhere usually obtains, into the systematic connection of the different subjects referred to; and by the circumstance that only summary notice is taken of some particular musical topics, followed up in laborious detail in many of the treatises, but not requiring, as it seems, to be so dealt with, in a work intended, like this, for the instruction of the general reader. The fatigue which the perusal of a scientific work on Music is apt to occasion, will also perhaps, in the present case, be somewhat relieved by the insertion, which the Author has been led to make, of a few illustrative examples from great composers. These will chiefly be found in the Appendix of Notes, together with some other matters which tend to a similar relief, as being rather of an interesting or curious, than of a didactic, character.

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CHAPTER I.

OF THE SCALE, OF MODES, OF NOTATION, OF KEYS, OF TIME, AND OF ACCENT.

A note is any musical sound; that is, any sound giving pleasure to the ear.

The ear distinguishes notes from each other in various respects, and, among others, in respect of *height*; a difference which has been ascertained by experiment to depend upon the relative number of vibrations made in a given time by each of the sounding bodies; a body whose vibrations are more frequent, emitting a higher note than one whose vibrations are less frequent.

The degree of the height of a note is called its *pitch*; and the amount of the difference of pitch between any two notes is called the *interval* between them.

The *scale* is a series of notes, each successively ascending or descending in pitch, at certain prescribed intervals from each other.

The number of notes in the scale is eight; and they are denominated (counting upwards) as the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th; the 8th being also called the *octave* of the 1st.

Any note or musical sound whatever may be made the first of a series; so that the scale determines nothing as to the particular notes comprised in it; it only determines their number and the intervals at which they stand in respect to each other.

The 1st and 8th notes of the scale are in such relation to each other, that, though differing considerably in pitch, they are nevertheless felt by the ear to be very similar, or in a manner identical; a circumstance owing to the simplicity of the ratio (viz. 1 : 2) between the numbers of the vibrations of the strings, or other sounding bodies, by which these notes are respectively emitted.

The eight notes of the scale collectively are said to be the *key* of the 1st note, and that note is consequently called the *key note*. Thus, if the scale begins with the note known among musicians as C, the eight notes of which this is the 1st are called the key of C, and C is called the 1st of the key or (more usually) the *key note*.

The intervals comprised in the scale, as between *contiguous* notes, are of two kinds—the one greater, called a *tone* (or a *second*), the other less, called a *semitone*; some notes having a tone between them, and some a semitone.

The scale admits of two different arrangements, as to the order of succession of the tones and semitones; one arrangement being called the *major mode*, and the other the *minor mode*.

The first arrangement, that is, the major mode, is as follows :
(Ascending)—Tone, tone, semitone, tone, tone, tone, semitone.

(Descending)—The same reversed.

The second arrangement, that is, the minor mode, is as follows :

(Descending)—Tone, tone, semitone, tone, tone, semitone, tone.

(Ascending)—The same reversed, subject to certain variations *, to be afterwards explained.

* Vide post, p. 12, 13.

From what has been said, it may be collected that the system admits, in either mode, a variety of keys; because any note whatever may form the first of the series, and, with the seven notes that follow, will consequently constitute a key. It remains, however, to explain more particularly the manner in which the several keys are produced.

And, first, in the major mode.

Some particular sound being first fixed *, and a name (suppose C) assigned to it, it is then made to form the 1st or key note of the key of C; the notes of which are designated (ascending) C, D, E, F, G, A, B, \bar{C} †; for the 8th (or octave of the 1st) being in a manner the same (as already explained) with the 1st, is denominated by the same letter. And as the upper C may in turn be made the 1st of a similar series ascending, and the lower (or original) C the 1st note of a similar series descending (every note in each new series being tuned an octave to, or replicate of, the note of the same denomination in the first or original series), and as this progression may be pursued to any extent, until the sounds become too high or too low to be musical †, we have thus a considerable number of sets or *octaves* (for the word has this *collective* sense also) of the key of C, differing from each other only in pitch.

This key of C (in the major mode), with its intervals of tones and semitones marked below the letters, will be as follows (*ascending*):

C	D	E	F	G	A	B	\bar{C} ‡
	tone		tone		semi		tone
	tone		tone		tone		tone

and this expresses, not only the 1st or original octave, but all the others.

But here it becomes necessary, at the expense of some

* See Appendix, Note (A).

† See Appendix, Note (B).

‡ A dash over a letter, as here, will be used in this work to express a higher octave. Thus, \bar{C} , means the note that is an octave above C