## New Musical Grammar: OR. THE

# Harmonical Spectator.

CONTAINING

All the useful Theoretical, Practical, and Technical Parts of

# MUSICK.

Being a New and Correct

## INTRODUCTION

All the Rudiments, Terms, and Characters,

Composition in all its Branches.

Several Scales for Mutical Instruments;

Philosophical Demonstrations, ON

## The Nature of Sound.

Laid down in so concise and easy a Method, as to be understood by the meanest Practitioner, whether Vocal or Instrumental, by Way of Question and Answer. With variety of Cuts correctly engraved.

By WILLIAM TANSUR: Mufico Theorico. Author of The Universal Harmony, &c.

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### THE

## PREFACE.

To all Levers of Musick.

USICK, the Subject of this Dif-'course, is a Science of Sound; or 'an Art that Teaches how to bring 'all Sounds to the Ear, whether Grave or 'Acate; and consists of three Parts, i.e. 'Tune, Time, and Concord.

'And as. this Art was known in the earliest Times, so it ought now to have the Su'periority of all others, as it is the most curious and sublime; whether we consider it either in its Theory, its Practical, or in its Mchanick-

Parts.

The Theoretick, or Mathematick-Part, is the Grammar, or Natural Ground-Work; and greatly Employs the Tocught, to find out all the Racios and Porpertions of Sounds, in all their curious Branches. This lies very deep in Natural-Philosophy, and requires great Referch to unfold it, before such Sounds can be model'd, to make Harmony compleat.

The Practical-Part, is the well Disposing

oi

## ii The PREFACE.

of Sounds, which compose and contrive them into fo many curious and pleasing Varicties; this proceeding from well taken Concords, and intervening Discoras, &c. in a regular Com-

polition.

The Mechanic, or Active-Part, is that which readily performs, and gives a Production f of fuch Sounds to the Ear and Understanding; either from the fost Modulation of a natural Veice, or from the curious Dexterity of Hand,

on an Artificial Instrument.

'Many Years have I laboured in this Divine Science, under the Denomination of a Master of Musick, and have been acknowledged as ' fuch by my Pupils; when, alas-I knew, and acknowledged at the fame Time, that I fell a great Way short of it. Any Person that is qualified for such a

Title, must not only be a Grammarian, but also 'a Matter of Letters and Languages, in order to unfold what is lock'd up in the Closets of the Learned .- He must be an Arithmetitian, and able to explain Numbers, and even the Misteries of Algebra; and also a Geometrician, to eivnce in great Variety, the Original of Intervals, Consonant, and Disonant; by the Me-' chanical Division of a Monochord .- He must be a Poet, to conform his Thoughts and Words to the Laws of precise Numbers; and Distin-

- He must be a Mechanick, in order to know the exquisite Structure of all Instruments, whether Wind, ftringed, or Pulsatile. A Met-

guith the Euphony of Vowels and Syllables, &c.

talift, to explore or find out the different Con-' temperations

### The PREFACE. iii

temperations of Grave and Acute Toned Met-' als, for casting Bells for Chimes, &c. - He ' must be an Anatomist, to shew the Manner, and Organs of the Senfe of Hearing. - An Harmo-'nian, to lay down the Demonstrative Rules for ' Composing, &c. and he must be so far a Magi-'cian, as to excite Wonder, by bringing into · Practice all the admirable Secrets of Mustick: ' Such as Sympathies, and Antipathies between ' Concords and Discords; Together with the Artifice of Tules, for the strengthening and continuing of weak Remote Sounds, and mc-' lorating these that are Strong, &c -But stop 'here, What a Field of Learning must I pais ' thro' to be justly called Master of Musick? --'A Title, that no one could ever justly claim, ' yet attain to.

But let us be content, since God from this Gi/t of Missick, hath enabled us to sing his Praise whilst on Earth, for our Godly Solace and Comfort, by which we may imitate the

very Angels in Heaven.

And as this Art is the Gift of God, how much ought we to endeavour to the right Knowledge of it? But what shall I do more to promote it, then what I have done in this

finall BOOK of Instructions?

As I have wrote at my own Peril, so I leave all to judge at their own Pleasure; not having the Vanity to think I am without Error, nor yet so weak, as to affert it: neither do I imagine it will escape the Penetration of the Critic's Eye: But let him that never Err'd, cast the sirft Stone.

' As

### iv The PREFACE.

'As to the Work it is flort, familiar, and Instructive; and contains all the Practical and uteful Theoretical Grounds of Musick; which will be of general Use, so long as there are any to Practice it: in which many Scales are incerted, to oblige some particular Persons, who greatly importanted me to publish this Work.

'Mork.

'And tho' this finall Treatife is intended to fet this Divine Art in a more clear Light than it has been heretofore, and to end many Controverses that have been undetermined; yet I know, it will not please all, but if it will please my Papils then I have my End; being well assured that none will spurn against it, but those who have been gulit of such Mislakes as are within hinted at: But if what I have here endeavour'd doth not agree with the Dictates of some Person's Judgment, I hope they will Pardon my Horest well-meaning Intentions; having through the Whole endeavour'd by Matter of Fact, to inform and Instruct the Minds, rather than endeavour to please the Ear, by Flowers of Rhecoic.

I therefore recommend this Work to all Persons, both High and Low, Rich and Poor, one with another; hoping it may have a candid Reception, and be an Assistant even to All; to the surtherance of Musick, and the Glory of God; which will be a great Pleasure, and give the greatest Satisfaction, to their most Harmo-

nious, and humble Servant,

June 24. A. D. 1746.

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#### ERRATA.

Page 98 line 20, for no:, the Mi, read not; if the Mip. 100. line 33, for Remainder, read Reminder.—p. 104 set the two Bs on the line. and make the 3, 10.—p. 106. for Tenes, read Tones.—p. 110. for Resourse, read Recourse.

## Poetical Encomium,

On the several Pieces published by Mr. IVilliam Tansur: But more especially on his two Last, viz. His Universal Harmony, and this, his New Musical Grammar,

OF all the various ARTS by Man design'd, "To vie with Nature, and improve the Mind "

" Thy Labours T A N S U.R! merit greatest Praise,

" And claims the Tribute of my Friendly Lays: " For what Invention fince the World began,

"To ripen Musick in the Breast of Man,

Can stand in Competition with thy Plan?

" By thy Instructions, we are taught to raise Our Minds, to Sing our dear Redeemer's Praise;

"Thy Harmony, the godly Swains invite,

" To make thy Godly Songs their fole Delight.

"Tho' ORPHEUS once the mute Creation drew,

"Thy Notes attract the Mute, and Speaking toa.

Leicester, June 10. 1746. THE COLOR OF THE SECOND

A

# New Musical Grammar:

OR, THE

# Harmonical Spectator.

By WILLIAM TANSUR.

### CHAP. I.

Of the GAMUT, or Scale of Musick: And of the Semitones contain'd in an Octave: And of Cliffs.

(Scholar and Master.)

Scholar. A S MUSICK is esteem'd in this our Age, as well as in all others patt, as a divine and misserious ART or Science, I would gladly become a Proficient thereis, never desiring a better Tutor than you alone; would you but take upon yourselv to great a Trouble.

Mafter. I am well pleased with your Choice, by Reason, it is the very Marrow of all other Sciences whatsvever, when Divinely applied;

an

and the very best Method in spending of vacant Hours on this Side the Grave: By which we imitate a Heaven on Earth, and have a true Relish of those harmonious Sonets that are perform'd by Angels: Therefore, as you chuse me as a Tutor in that delightful ART, I shall assist you all I am able, to make you a good Prosector, and lead you regularly on, thro' the whole Science of Musick, the easiest way I can invent.

Scholar. Sir, I thank you most beartily, and am ready to begin directly; and desire you'll tell

me the very first Rule.

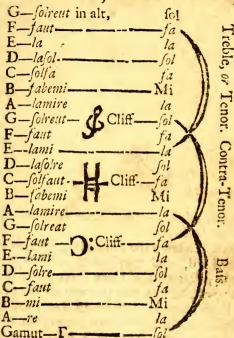
Master. The stress is the Gamur, or Scale of Musick, a Table or Lesson to called, which teacheth you the first Rudiments of Song, when perfectly learnt and understood; and without which you never can attain either its Theory or Practice.

Scholar. Who first invented this Scale, and

why is it called GAMUT?

Master. As to its first Inventor, it is hard to prove, it being attributed to several Grecians in past Ages; all of which vary as to Form and Method: But, the present Scale, is said to be invented about 700 Years ago, by Guido Aretinus, a Monk of Tuscany, who added more Lines to it, to make 5; and plac'd this Greek Letter I Gamma, or G, at the Root of the Scale; which shew'd that he had it from the Greeks, and to perpetuate his Memory it begun with the first Letter of his Name, shewing thereby that he was the Improver of it; The Scale is as follows:

The Gamut, or Scale of Musick.



Scholar. What is the End, and Office of the

Scale of Musick?

Master. By the Gamet, or Scale of Musick, we distinguish all Sounds or Tones, whether Grave or Acute; for which Reason it must persectly be learnt by Heart.

Scholar. In what Method me ft I proceed; must

lables, as sol, la, mi, &c.

2 Mafer:

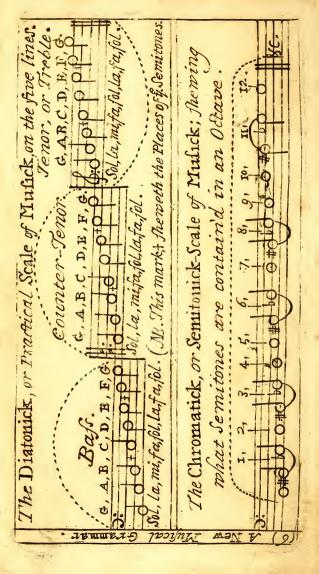
Master. Those Names or Words which you call hard, are very easy to what they were in the old Greek Scales; for then, they were ten times harder, and more perplexing: and as these now used, appear somewhat difficult to learn by heart, it will be more useful to reduce them into shorter Terms, according to the 7 Letters of the Aphabet: as G-fol, A-la, B-mi, &c. which Abreviations are sufficient for the understanding of any Lesson of Musick whatsoever; by reason, those difficult Terms are only set to show their Antiquity, and not to express the several Degrees of Sound.

Scholar. Must the whole Scale be learnt alto-

gether, or in Parts?

Master. To learn the Scale altogether, is too tedious, hard, and perplexing for any young Beginner; One of the three Parts being sufficient at sirst, before you proceed to the other two: Beginning at the lowest Letter G, and so ascending to G above, and then down to G again; imitating a Ring of 8 Bells, both forward and backward in a regular Diatonick-Order, as follows:





Observe also, that,

What Note soe'er you please to name, ? An Eighth to that is just the same. S

And also that,

Salow mi, twice fing fa, fol, la: Below mi, twice fing la, fol, fa.

And then mi comes in again.

Scholar. Why have we in the Scale of Mulick, twice fol, twice ta, and twice la, and but once mi?

Muster. By reason mi is the Muster-Note, and guides ail the other Notes, both above and below it; and when the mi is transpos'd, all other Notes are transpos'd with it; still lying in their Natural-Order according to the Diatenick-Scale, &c.

Scholar. Why bath C three different Terms in the old Scale of Musick, as C-faut, C-fol-

faut, and C-folfa, &c.?

Mister. I suppose, such Differences are only set to distinguish the three several systems or Parts of the Scale; as Bass, Tenor, and Treble; all being in effect as one and the same, and Octaves or Eighths to each other.

Scholar. Why is the Scale of Musick distinguished two ways; that is, by Way of Letters,

and by way of Sal-fa?

Master. Every Composition of Musick is understood from the Letters, if it be ever so artfully disguis'd by Transposition; which Letters are mostly used for instrumental Performance: nevertheless, tho' the Syllables, sol, la, mi, fa, &c. are appropriated to Vocal-Musick, yet I think it not amiss for young Beginners to call their

their Notes as well by one, as by the other; it being most instructive to the Art of Musick.

Scholar. Alth' I have now learnt the Gamut, perfectly by heart, and can fay it very readily, pray tell me, what use will it be to me, in learning

a Piece of Mulick?

Master. O grand Stupidity! would you learn a Table, and not know the use of it? the getting it by heart a vails nothing, unless you remember the Lines and Spaces, and call them by the Names given in the Scale: which Sounds (or Notes) must be call'd by such Names as are given to that Lineor Space; always observing, that every eighth Nete (together with its Degree of Sound) bears the same Name as it was before, as I before hinted.

Scholar. Suppose I should meet with more

Lines than 5, how must they be called?

Master. Such Lines are called Supernumery, or Ledger-Lines; all above G in the Treble are called Notes in Alt; and all Notes below Gamut in the Bass, are called Doubles; as, Alamire in alt, Double-Elami, &c.

Scholar. Are all Sounds regular one from ano-

ther, ascending and descending?

Master. No, when you ascend, or descend from mi to sa, or from la to sa, you are to rise, or fall but half a Tone, all the rest in the Octave being whole-Tones; suppose a whole-Tone be an Inch, the semi or half-Tone is but half an Inch; which is a Mathematical Demonstration, according to the sollowing Scale:

The

The Practical, Scale of Musick, Diatonick and Semitonick.

	Dinionick at	iq Semilonick.	
	[G	G natural	}
	E to	-F sharp, or G flat	
	E la	-E natural -	
	73	-D sharp, or E flat	
OSleve.	D	D natural ————————————————————————————————————	Odlere.
0.0	C	- Cnatural -	0
	B mi	-B natural	
	Λ 1.	-A sharp, or B flat	1
	A	-A natural -G sharp, or A flat	of a
	G	-G natural —	

Scholar. By this Table or Scale, I nearly understand the Regular-Order of the Tones; But pray what is meant by the Words Diatonick,

and Semitonick?

Master. The Word Diatonick, is, an Epithet, or Name given to the Scale of Musick, when it moves by Tones, and Semitones, as the plain and natural Scale of Musick. The Word Semi, signifies the Half, or when a whele Tone is divided into two Parts; which Natural Notes are either raised or falled half a Tone from their Natural-Order, by adding a Flat or a Sharp before the Note: And as this Scale takes 12 Semitonick, or Chromatick Seale; which being used to the Diatonick, enables us to express all the practical Degrees of Harmony. (See the Plate, Page 6.)

A 4 § 2 Of

9 2 Of Cliffs.

Scholar. THAT is a Cliff, and its Use; or what is meant by the Word Cliff?

Mafter. A Cliff, in Musick, is a Character rlaced at the Beginning of the 5 Lines of a Piece of Mutick, in order to denote what Part of Musick it is; and what relation each Part beareth with another. It is called a Cliff, from Clavis, in Latin; and fignfies, To open, or as 2 Key to let into, &c. which openeth to us the the Names of every Tone in Musick, &c.

Scholar. How many Cliffs are now used in

Munck?

Master. If you look back into the Scale of Mufick, you'll find three in Number, all of different Forms, each being appropriated to the three feveral Systems, or Parts thereof; and are called the F-Cliff, the G-Cliff, and the G-Cliff.

Scholar What is the Form, and Use of the

Master. The F-Cliff is generally set on the secona Line from the Top, and proper for the Bals, and gives to its Place the Name F, and when sung, is call'd fa; all other Tones lying in Regular-Order both above and below it; and

thus made: :

Scholar. What is the Use, and Form of the C-Chit?

Ma. The

Master. The C-Cliff is moveable, and may be set on any one of the 5 Lines, and gives to its Place the Name C, and when sung call'd fa; guiding all other Tones in Regular-Order, both

above and below it, and thus made:

This Cliff, in the ancient Musick, was mostly used to the Tener, but now mostly applied to Counter, or Inner-Parts, when above Three.

Scholar. Way was the C-Clift so much west

formerly, and so little in use now?

Master. By reason it was moveable and uncertain, and disticult for every Practitioner; by being set on any Line the Composer pleased, to keep his Notes in the Compass of five Lines; for in those Days they changed the Cliff, to change the Key; But our Keys are regulated by shirting the M: (or Master-Note) by the help of Flats, or Sharps, and therefore we have no necessity to change the Cliff; but rather use the G-Cliff for the Tenon, by reason it is of more certainty to the Personner; for in those Times I imagine, that shifting the Mi by Sharps was not invented, neither was any Transposition by them. so nicely understood as it is at this present time.

Scholar. What is the Use, and Form of the

G-Clift ?

Mafter. The G Chiff is usually set on 2d Line from the Bottom, and now mostly used to the Treble, or Tener; (or may be used to any Upper-Part whatsever) and gives to its Place the Name G, and when sung, called fol; and guidath

guideth all other Notes in Regular-Order, both See the Cliff's in the Scale. Page 3.

Scholar. Cannot a Tune be as well prick'd

down without a Cliff, as with?

Master. No, by no means at all, for if there was no Cliff, you could neither diftinguish one Part from another, nor give a Name to any Note: But, put at the beginning, a proper Cliff, and that Cliff will give a Name to that Line whereon it stands; and then you, with case, may find a Name for all other Notes. both above and below it. - To prick down Musick-without a Cliff, is a thing too much practifed in our Kingdom at this time, to the great Ruin, and Confusion of many a good Composition by many conceited Coxcombs, who lead othe six the dark, being blindfold themfolves with Conceir and Ignorance; and fcorn to be contradicted from their own Way. Thus, they lead others into Error, and inflead of orvamenting a Church with Pfalmody, they put the whole Congregation into Confusion; and inflead of rendering Divine Musick Angelical, they make it contemptable enough; to the great Grief of such as know the Excellency thereof.

Scholar. Were there ever any more Clist's used

than the three you before-mentioned?

Master. Yes, I have read, that some ancient Writers used to sign 7 Cliffs at the beginning of their Mufick, according to the 7 Letters of the

Alphabet ;

Alphabet; and called every Letter a Cliff, thus:

Seven Cliffs.	F — — ] E D — — ] C B — — ] A.	N. B. That in those Days they used but four Lines.
Se	A	

But this being too perplexing, as well as cumbersome, they afterwards used only 3 Signatures instead of 3 Letters to express the Natural

ral Tone of the 3 Cliff's as are now used.

Mr. Kelper took great Pains, to shew that the Signatures of the 3 Cliff's were nothing but Corruptions of the Letters they represented; and that they made the Practice of Mufick much more difficult and perplexing: whereby Mr. Salmen proposed to reduce all Parts of Musick to one Chiff. But this was look'd on, by some as mearly whimsical; and tho' I may be counted fingular, I cannot omit giving my Opinion concerning our pre'ent Ciffs, knowing how inconvenient it is to every Practitioner to be daily perplex'd with the moving of them, sometimes on one Line, and then again on ancther; not only so, but I think it would be mo e easie to ever Practicioner, did our Cliff's represent such Letters as they are assigned for; which I would have thus:

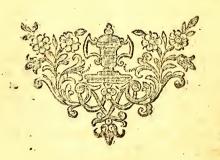
For the 
$$\begin{cases}
G & \text{Cliff} \longrightarrow Gs : \longrightarrow \\
C & \text{Cliff} \longrightarrow Cf : \longrightarrow \\
F & \text{Cliff} \longrightarrow Ff : \longrightarrow
\end{cases}$$

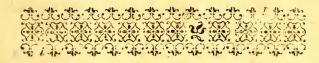
By

## 14 A New Musical Grammar, &c.

By this New Cliff Method (as I call it) there appears to our View, First, the Letter itself; and secondly, an Abrevation of the natural vocal Syldide; which together, gives a clearer Idea to the Performer; and all Musick would be in a far clearer Light; if such Cliss were assigned always to one six'd Line; for every Move of Cliss, still causes a new Thought, and too many Thoughts clog the Memory.——From what has been said, it appears, That

The Gamut-Scale must well be learnt by heart, Both Line, and Space, and Clist of every Part: To Tune aright, must be your chiefest Care, Mi ta, and la ta, natural Half Tones are.





### CHAP. II.

Of Notes, and their Names, and Rests; and of other Characters used in Musick, &c.

Scholar. IR, you having, in the former Chapter, g iven me a true Light to the Understanding of the Gamut, and shewed me therein the several Degrees of Sound: and also the Use of Cliss: I now desire your farther Assistance; kow long, or how short spaces of Time

such Sounds are to be held?

Master. The Continuance of Sound is express'd by several Characters call'd Notes; each having a different Name and Shape. A Cistation or leaving off of sounding, is express'd by various Characters call'd Rests, or Notes of Silence; which Marks import, that you must rest, or cease from finging, or playing, just as long as you are sounding any of the respective Notes, &c. when these Characters are persectly understood, then you will be able to know, what is call'd Time and Measure.

Scholar. You seem to bint, that Notes and their Rests, are but a late Invention: Pray tell

me who invented them, and when; and how each Note and Rest is made, and what length of

Time each Note contains?

Mafter. Before the Year 1330, the feveral Degrees of Sound were all express'd of an equal Length of Time; when Johannes de Miris Dr. of Paris, invented different Figures, called Notes and Refts, and gave them the tollowing Names:

1. The Semibreve, is in Form like the Letter O, and founded so long as you may tell r, 2, 3, 4, by the Pulses of the Pendulum of a large House Cock; and is call'd the Measure-Note, because it measureth all the other; and its Rest, denotes to keep filence the same space of Time.

2. The Minim, is but half the length of a

Semibreve, having a Tail to it.

3. The Cretchet, is but half the length of a

Minim, having a black Head.

4. The Quaver, is but half the length of a Crotchet, having the Tail turned up like a Hook.

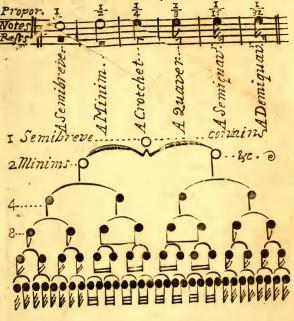
5. The Semiquaver, is but half the length of a Quaver, having its Tail turned up with a

double Stroke.

6. The Demisemiquaver, is but the half of a Quaver, having its Tail turn'd up with a trible Stroke.

These fix Notes, and their Rests belonging, are now generally used; but the better to explain each Note, Rest, and proportion of Time, observe, and learn the following Scale.

A Scale of Notes, and Refs: and their Proportions.





By this Scale, you see, that one Semibreve contains two Minims, two Minims contain four Cretchets; sour Cretchets contain eight Quavers; eight Quavers contain sixteen Semiquavers; and sixteen Semiquavers contain thirty-two Demissemiquavers So that in a Mathematical Sense, if the Semibreve be one Bar of Time, the Minim is one 2d; the Cretchet one 4th; the Quaver one 8th; the Semiquaver one 16th; and the Demissimiquaver one 32d. &c.

Scholar. Were no more Notes used formerly

than those six Sorts before-mentioned?

Master. Yes, when Notes were first invented, they used three other serts of Notes, i.e. a

Breve, a Long, and a Large.

1. The Breve, was a large square Note, and as long as two Semibreves; and its Rest was drawn by a broad Stroke over a whole Space, from Line to Line.

2. The Long, was a large square Note, as long as two Breves, with a Tail on one Side; and its Rest was drawn a-cross two Spaces.

3. A Large, was a larger square Note, with a Tail on each Side of it, and was as long as two Longs; and its Rest was as two Longs Rests, &c But as these Notes are seldom used but in old M sick, I shall omit a Scale; the Large being too long for any Voice or Instrument, except the Organ: So that the Semibreve, which is now our longest Note, was formerly their shortest.

### § 2. Of other Characters used in Musich.

Scholar. N Page 17, you gave me a View of
12 different Characters used in
Musick; But if you don't hew their Use, as
well as their Shape, I am still in the dark.

Master. I must consets your Demands are much to the Purpose, for to know a Character, and not know how to use it, is of little or no Service; therefore I shall discourse of them separately, as they stand on the Plate beforemention d, Page 17.

A Flat (or rather a Feint) is used to sink any Note it is set before, half a Tone lower. Suppose a Note should rise a whole-Tone, and I place a Flat before it, it must then rise but half a Tone; the same as from mi to fa, or from la to fa &cc. In like manner, all Flats that are placed at the beginning of the swellines, serve to flat or sink all such Notes as shall fall on that Line or space thro' the whole Stanza or Lines, except any Note be contradicted by an accidental Natural, or Sharp. Flats are also used to regulate the mi in Transposition of Keys.

A Sharp, is contrary in nature to a Flat, and is used to raise or sharpen any Note it is set before half a Tine higher. Suppose a Note should fall a whole Tone, and I place a Starp before it, then it must fall but half a Tone: the same as from mi to fa, or from fa to la. &c. Obferve that all Sharps that are fixed at the be-

ginning

ginning of the five Lines, serve to sharpen or raise all such Notes that happen on that Line or Space thro' the Strain or Stanza; which Sharps (as well as Flats) serve to regulate the Tones to the Diatonick-Order, when the Key is transpos'd, &c.

A Slur, or Bow, is drawn under, or over the Heads of any Number of Notes, when they are fung but to one Syllable. Oftentimes you'll meet with Notes tied together with Strokes drawn thro' the Tails, which are done for more ease to the Sight. If they have single Strokes, they are Quavers; if double Strokes, they are Semi-quavers; and if trible Strokes, they are Demi-semi-quavers, &c.

A Point, or Point of Addition, is a little Dot, always placed on the right side of any Note, to denote that it must be held half as long again as it was before. When this Point is added to a Semibreve, it must then be held as long as 3 Minims: so of Crotchets, Quavers, &c.

Minims; so of Crotchets, Quavers, &c.

N. B. That sometimes you will meet with a

Point at the beginning of a Bar, which belongs
to the last Note in the foregoing Bar, which

Notes are called Syncopation, or Driving Notes.

A Director, is always placed after the last Note of any Stanza or Line of Missick, at the end of the sive Lines, in order, to direct the Practitioner to the Place of the sirst Note on the following Line. By some this Character is called Index.

A Divider

A Divider, is placed betwixt the feveral Columns of Missek, when two, three, sour, or more Parts move together; in order to divide the Score of the Composition, that the Sight may not be perplex'd with a multitude of Lines together; which Character slows, what Parts belong to one another, and move together, and which do not, &c.

A Repeat, denotes a Repetition, or that such a Strain of the Composition must be repeated over again from the Note this Charaster is set over, under, or after. Either of these Terms signify the same, viz. Repetatur, Replica, Replicato, Represa, Reditta, Riditta, Envore. (Ital.)

N. B. This Charafter is likewise used in Cannons, in order to direct the Persormer that the sollowing Parts or Fuges are to fall in

at such Notes it is placed over, &c.

A Bar, is a streight Stroke drawn perpendicular athwart the five Lines, and divides the Time of the Composition according to the Meafure-Note of the Movement.

A double Bar is used to divide the several Strains of Musick: and if it be dotted on each side thus: ||: it then denotes a Repetition or, that such a Part, or Strain is to be repeated. It also signifies a Pause or to Rest so long a Time as the Measure-Note contains. These Bars are mostly used in Church-Musick, in order to give time between the Lines, that the Congregation may not be consus'd by too quick a Movement,

that the whole Church may stop together between the several Lines of the Pialms, &c.

A Natural, is usually set before any Note, in the middle of a Composition, that was made either flat or sharp on that Line or Space, at the beginning of the five Lines; in order to take away that flat or sharp Quality occasioned to such N tes by the Flats or Sharps so placed; causing such Notes to be sung or play d in their Natural primitive Sound. Hence it is to be noted, that every Letter in the Scale of Missich hath three several Terms or Denominations, according to the Sound given, i. e. Natural, Flat, and Sharp; the Natural being a Medium between the other two Extreams.—See the Plates, Pages 6 and 7:

A Shake, or Trilloe, is the principle Grace used in Musick, and so ornamental to a Composition, when used in proper Places, that it is the very Life and Spirit of Harmony; so that nothing else is expected after it, when it is well performed, ending right, and in a regular Key. This is, to shake, tremble, or wrable your Voice, or Instrument on such Notes it is set over, very quick and distinctly, the distance of a whole Tone, as mi la, mi la, mi la, &c.—
First learn to do it slow, and then quicker, and with a little Practice you will get it to Persection. It may be used on all descending prick'd Notes, on all descending sharp'd Notes (if they are not too short) and on also on all descending Semitones, and always on the Note before a Close.

A Chife.

A Clese, or Conclusion, is three, four, five, or more Bars drawn across the five Lines, after the last Note of a Piece of Musick, in a conical Form, each diminishing in length, 'cill it ends in a Point towards the left; which fignifies a Conclusion of the Composition, or a closing up of all Parts in the principle Key, &c.

#### The whole in Verse.

The Semibreve, our Measure-Note we call, Good Reason wby, for it includeth all The leffer Notes; as I before have told, On Page seventeen, you may the same behold.

A Flat, or Feint, deth press a Note down low'r, Just half a Tone, to what it was before: And what if fo? if Tune should then require, A Natural will raise't a half Tone bigh'r. If Natural-Notes should be too flat and dull, A Sharp will raise your Notes more high and full By half a Tone, than what they were before; Which if too high, a Natural will bring low'r, And rectify both Flat, and Sharp, in score.

A Slur, doth many Notes together join; A Point, it addeth balf as much more Time: A Repeat, causeth Parts to move again, And Double-Bars, they do divide each Strain. A Single-Bar, it doth divide the Time; And a Direct, guides to the following Line: A Rest craves Silence, be it short or long; The Trill, or Shake, doth ornament the Song.

As the Divider keep the Score in Bounds, Ev'n so the Close includes the latest Sounds.

### CHAP. III.

Of Time in general, and all its Moods: and hove to beat any of them.

Masser. THIS Part of Musick is called Time, and is as necessary to be understood as Tune, by reason, no one can either sing or Play without the true Notion of it, neither in Concert, nor alone, to give any delight to a musical Ear; for by this, every Note is truly regulared, so as to be neither too quick, nor too sow; but all Parts to move in a true Decorum.

Scholar. Sir, Please to tell me, how many Sorts of Time

Master. Of Time, there are Two Sorts, or Measures, viz. Binary Measure; and Trenary-Measure: i.e. Common-Time; and Tripla-Time.

Scholar. What is meant by the Word Binary, why is it fo

called, and how is that Measure understood?

Master. It is called Binary Measure (otherwise Common-Time) from its Rise being equal to its Fall; i e. of the Hand, or Foot, in beating Time; which regular Motions are called Time and Measure: Being a just Representation of the regular Motions of a Pendulum; 4 of which Pulses is the length of a Semibreve; 2 the length of a Minim; and 1 the length of a Croschet; (a Quaver being teckon'd in Time as the Pulse or Beat of a common Watch) so that I Pulse of a Clock-Pendulum is the Time of 2 Quavers, 4 Semiquavers. or 8 Demisemiquavers, &c.

I Of Common-Time.

Scholar. How is Time and Measure regulated by the Mo-

tion of the Hand, or Foot ?

Master. It is first to be noted, That Common Time, is menfured by even Numbers, as 1, 2, 4, 8, 16, &c. when one Bar includes such a Quantity of Notes as amount to one Semibreve; which is called the Measure-Note, the Time Note, or a Whole-Time.

And as the Semibreve is held so long as you may leasurely tell 1, 2, 3, 4; you must keep your Hand or Foot down while you tell in thought 1, 2; and up while you say 3, 4;

you having once down, and once up in every Bar: But in doing this, your Thoughts must guide the Motion, and not the Motion drive the Thoughts into Hurry and Confusion: This be-

ing the most curious Branch of Musick, &c.

If your Musick consists of two Minims in a Bar, then, you sound one whilst you tell 1, 2, down; and the other while you say 3, 4, up. If four Croschets in a Bar, then 2 down, and 2 up. If eight Quavers in a Bar, then you beat 4 down, and 4 up, &c. each Bar containing two Beats; and each Beat two Motions of Palses, &c.

Some there are, who make 4 Beats to every Bar, i. e. one to each Croschet, 2 to a Minim, and 4 to a Semibreve; which Method I rather chuse than the somer (in any Time whatsoever) observing to have the Hand, or Foot down at the first Note in every Bar; and to beat Ress as it they were Notes,

&c. ftill in a Quadruple Proportion.

Scholar. How many Moods are there in Common-Time?

Master. There are Three, viz. 1st. The Adagio Mood; 2d.

The Largo Mood; and 3d. The Allegro Mood

1st. The Adagio Mood, denotes a very Row Movement, and is marked thus: C.

2d. The Largo Mood, is half as quick again as the Largio Mood, mark'd thus:

3d. The Allegro-Mood, is half as quick again as the Largo Mood, and as quick again as the Alagio - Mood, and is thus marked:
So that a Minium in Allegro, is but a Crotchet in the Adagio,

Sometimes, in this Mood, you have but two Cretchets in a Bar marked thus: 2, being perform'd as 2 diminished Minims: which, I think, are the most proper Notes for this Mood, by reason it is as quick again as Adagio, and ought to consist of Cretchets in their primitive length, and not of Minims half diminished, &c.

But the better to explain what I have said, I will set you an Example of Notes, with Figures over them, directing how to count the Time; and Letters, (a for up, and d for down,)

how to beat it; being

A Table



# A Table of Common-Time Moods.

I. Adagio Mood: Very Slow.



2. Largo Mood: A little Zuicker. 12:34. 12:34.12 34.12 34.12 34.



3. Allegro Mood: Very Quick.





#### 1 2 Of Tripla-Time.

Scholar. Sir, As you have given me a clear Description of what you call Binary Measure, or Common-Time, both in Words and examplary Notes; I now descre, you'll relate to me the Nature of Trenary-Measure, and why it is so called?

Master. Trenary Measure, Tripla Measure, or Tripla Time, is so called, from its Fall being double to its Rise; i. e.

beating as many more down as up.

Scholar. In what Numbers does Common Time confift, how

is the Movement regulated, and how is it beat ?

Master. Tripla-Time, moves by Threes; as 3 Minims, 3 Crotchets, or 3 Quavers in a Bar, to be just as long again down as up.

Scholar. How many Moods have we in Tripla Time?

Masser. The Moods that we now use in Tripla-Time, are
Nine in Number; of which observe the following Table.:

A. Table of Tripla-Time Moods:

Binary, and Trenary.

Vocal Moods.   Inftrumental Moods										
3 2	3	$\frac{3}{8}$	6	$\frac{6}{8}$	9	9 8	12	12		
2 down, and 1 up.	3 Crotchets in a Bar, 2 down, and I up.	3 Suavers in a Bar, 2 down, and I up.	6 Crotchets in a Bar, 3 down, and 3 up	6 Quavers in a Bar, 3 down, and 3 up.	o down, and 3 up.	9 Quavers in a Bar, 6 down, and 3 up	Transcription of the following and 6 up.	6 down, and 6 up.		

By this Table you fee the Mord, or Mark, for every Degree of Time, and also how to bar, and bear any of them; which Table will be of general Use to every Practitioner.

Scholar.

Scholar. U'hy age Tripla-Time Moods mark'd with twe Figures at the beginning of the five Lines, and the under Fi-

gures always 2, 4, 8, &c ?

Master. It is to be noted, that all Sorts of Time are deducted from Common-Time, for which Reason the lower Figures have recourse thereunto, in order to denote what kind of Notes the Triples doth confift of. Ex. gr. suppose the Mood be marked this: -3-, then the 2, underneath imports that the Triple must consist of Minims: and as 2 Minims make one Bir in Common Time, the 3 over the 2, directs that you must fing 3 Minims (in Tripls Time) to 2 in Common Time: So the 4 hath regard to Crotchess, and the 8 to Quavers, &c.

Scholar. Sir, If you would explain each of the nine Monds before-mentioned separate, you will then set the whole in a far

tlearer Light.

Miffer. That will be almost Tautology; nevertheless, to gratity your Curioficy, nothing shall be concealed relating to this Science, that I am able to impart, either to you, or any other of my Fellow-Creatures; which, I know, is as bad as Gravel to the Teeth of such as teach Musick, and keep their Pupils in the Dark, for their own private Gain.

I. THE first, and generally the sowed Mood in Tripla-Time, is Sesquialtera Proportion; being a Triple-Measure of 3 Notes to 2, such like Notes in Common-Time; and performed in the same Time; which is half as quick again, or one-third quicker than Common-Time, in every Bar : Two to be performed down, and one up, mark'd thus: 3

This Mood is mostly used in Church and other grave Musick, and generally performed flower than the Rule, by reason of the folemnity of the Words, to which such Musick is adapted, Ór.

2. The second fort of Time is vulgarly for rather ignorantly) call'd, Three to Four; but I say, Three from Four; each Bar containing 3 primitive Crotchets (or Crotchets of their own proper length, being neither augmented nor diminished in Duration of Time) two of which to

be perform'd down, and one up; mark'd thus: 34

This Mood of Time, has been to many a great Stumbling-Block, by having a fale Term, almost by every Author; either from Ignorance, or from not being willing to impart to others what they knew themselves; or from their not caring to appear in print to be counted fingular.

Suppose, according to their Term, it be call'd Three to Four, then it imports one fourth flower than Common-Time, because I must perform but three Crotchets in Tripla-Time, in the Time of four in Common-Time.

But if I say Three from Four, then I am one fourth quicker than Common Time; by reason I have but 3 Crotchets in a Bar, and in Common-Time there are 4.

This is my real Opinion concerning this Mood, tho' I have formerly been miled by adhering to the false Term before-mention'd; knowing that when the Greater Number is over the less, then the length of the Notes are lessented in Proportion to the lower Figure: That

B

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the upper Number may be perform'd in the same time as those of the lower Numter: But when the lower Figure is greater than the upper, then the Time of the Notes is not diminished, but still perform'd to their primitive length substractively, &c.

- 3. The third fort of Time, is Three from Eight, each Bar containing three Quavers, 2 down, and 1 up, mark'd thus:  $\frac{3}{8}$ ' being as quick again as  $\frac{3}{8}$ .
- 4. The next Species, is Sextuple (or Binargi-Tripla-Time, by reason the Fall is equal to the Rise:) and call'd Six to Four; each Bar containing fix Crotches; 3 down, and 3 up, mark'd thus: \(\frac{6}{4}\), being as quick again as \(\frac{3}{8}\): the Figure of 3 being changed to a Figure of 6.
- 5. The second fort of Sextuple is Binary-Tripla, and call'd Six to Eight; each Bar containing fix Quavers, 3 down, and 3 up; marked thus: 6, being as quick again as 6/4.

- 6 The next Species is a Compound-Triple in Trinary-Measure, call'd Nine to Four, each Bar containing nine Crotchets, 6 down and 3 up, marked thus: 9/4, being half as quick again as 6/4
- 7. The second fort of Compound-Triple, in Trenary-Measure, is call'd Nine to Eight; each Bar including nine Quavers, 6 down, and 3 up, mark'd thus: \frac{9}{8}, being as quick again as \frac{9}{4}.
- 8. The third fort of Sextuple is Binary-Tripla, and call'd Twelve to Four; each Bar including twelve Crotchets, 6 down, and 6 up, mark'd thus: 12, being as quick again as 6.
- 9. The third fort of Sextuple, is also Binary-Measure, and call'd Twelve to Eight; each Bar containing twelve Quavers, 6 down, and 6 up, mark'd thus: \frac{12}{8}.

These are all the various Moods, both Binary and Trenary, that are now generally used in Musick, whether Vocal, or Instrumental: Though many more were used sometry, which we count as needless, as they are perplexing; by reason, the Nine modern Moods, that I first mentioned, are sufficient to gratify and please the

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the Ear with all the Variety of Movements that can be imagined, or defired.

Scholar. Sir, I return you a thousand hearty Thanks for your curious, and instructive Favours, hoping the World will be as grateful in Returns, as I shall by Endeavours, who am in Duty and Gratitude bound to do.

Master. I give you Thanks for your Complement, but the better to explain what I have taid, I will give you an Explanation of Notes, with Figures, shewing how to count the Time, and Letters, (d for down, and u for up) directing how to beat the Time of each Mood, as folfollows:





Of Time. 37

Observe, That both in Common-Time, and also in Tripla-Time, that your Hand or Foot be down at the first Note in every Bar; and that all odd Notes before a Bar be perform'd with the Hand or Foot up: Also, that Rests must be consider'd, and beat, as if they were Notes, &c.

Sometimes, you'll meet with a *Double-Bar*, drawn between two *Notes*, when the *Time* is not perfect on either Side of it; both *Notes* making but one *Bar of Time*; but this mostly happens in *Church-Musick*, to divide the *Lines* of the *Verse*, &c. A *Bar* of Time being given

between them.

Observe also, that you often meet with 3 Quavers join'd with a 3 over them, or perhaps over the first three; which three are to be perform'd in the 7 ime of one Crotchet.

Scholar, Were there no more Moods formerly

used than those I before mentioned?

Master. If we look back into the old Musick, we shall find Moods innumerable; nay, I may without Error say, past finding out; nor do I believe they themselves could ever perform what they pretended to write down. (Nevertheless, it will not be amiss to give you a small Glimpse of some Moods that I have seen in some antient Authors; which were as tollows:

Antient Triples.

2 3 5 1 16 2	5	6 6	6  9	99	12	12	12
1 16 2	7	1 2	16 1	2 16	I	2	16

វររង

But these I have only inserted by Way of Parenthesis, which I shall here close, and go on with Things of greater Importance.)

Scholar. What Difference is there in the Time of a Minim  $in^{-3}$ , and a Crotchet  $in^{-3}$ ?

Master. To answer this Question, Three Things are to be confidered, viz. 1st. Whether your Trip'es are compared with Adagio-Mood; 2d. Or the Largo-Mood; Or 3d. with the Allegro-Mood: These being of Common-Time.

1. Suppose,  $\frac{3}{2}$ , with 3 Minims in a Bar, is confider'd and compar'd with the Adagio with 2 Minims; then your Trenary is one third quicker in every Bar than Binary-Adagio; by reason you perform 3 Minims in 3, in the the same Time as you do 2 in the Adagi; each of which 3 Minims being diminished in proportion, one third of their primitive Adagio-length: And as in -3, you have 3 primitive or Adagio-Crotchets in a Bar, each Crotchet is half as long as one Adagio-Minim; so that when both Moods are in this Ca/e confider'd,  $-\frac{3}{4}$ , is just as quick

egain as  $-\frac{3}{2}$ , &c.

2. If your Triples are compared with the Largo Largo in Bixary, which is half as quick again as Adagio, (for a Largo-Minim is but as a prickt Crotchet to a Minim of Adagio) then a Largo-

Minim, and a Minim in  $\frac{3}{4}$ , are of an equal

Length; and a Crotchet in 3, is just the half, &c.

3. But, if you compare your Triples with the Allegro-Mood in Common Time, (which is half as quick again as Largo, and as quick again as Adagio) then it is reasonable, that every Member, or Note of your Triples, must proportionally be as quick again as they were when compared with the Adagio, &c. &c.

Scholar. Sir, I thank you heartily, but pray tell me how I shall know what Mood of Common Time the Moods of Tripla - Time are compared unto, esse I may perhaps sing so quick, or too flow.

Master. You reason very right, but that Secret, (as well as many others) I never yet saw explain'd by any Author, nor yet what is contain'd in the Three foregoing Paragraphs, howing been missed myself, by salse Terms and Moods in my Minority: Nevertheless, I will give you my Opinion about it, should I be counted ever so singular for so doing.

I think, (with Submission to better Judgment) that all Triples may be compared with any of the three Binary Moods, whether the Adagio, Largo or Allegro, and vary in Velocity accordingly; but still to move in such a Degree of Queikness as best becomes the main Subject of the Words, or Fassion intended: Having observed that all Persons differ in Time, one from another, tho' taught by one and the same Master; and cannot perform so well together, as if they had been regularly train'd up, and practifed one with another. - A Person may be said to fing or play Good Time, and yet, perhaps quicker or flower than another; by reason he makes a true Distinction of Notes and Rests; and gives each its proper Length, it he performs ever so quick or flow: But it is best to keep in a Medium, between the two Extremes.

Better would it be, if our Tripla-Time-Moods had the Common-Time-Moods always assigned just before them thus:  $C = \frac{3}{2}$ , &c. or at least, the Terms Adagio, Largo, or Allegro, set over the Cliff, at the Beginning of a Piece of Mussick or when the Time differs; for then, you might at one View, know what Sort of Binary Movement your Trenary is compared unto; and how quick, or flow the Movement was intended by the Author. This I say, would make Time very easy to every Practitioner, and take away many Obscurities that have heretofore contounded the Ignorant; for when Things are fally compared together, the Absurdity thereof darkneth the Understanding.

# § 3. The Doctrine of Pendulums applied to Musick

Scholar. SIR, In Pages 16 and 25, you told me, that the length of Notes were to be understood by the Pulses or Beats of a Pendulum, I should now be glad, if you would inform me a little farther concerning that Instrument: Imagining within myself, that it will be

of great Use to me, in keeping Time.

Master. In Mechanicks, the Observations made on Pendulums, is one of the nicest Pieces of Art that late Times have discovered, (being first observed from the Oscillancy or Oscillation, or the waving or toffing of the Body to and fro, as practifed by Children on Planks laid across Pieces of Timber, weighing each other up and down) the Motion or Vibration of Pendulums, backwards and forwards, ascertaining the Number of Beats at any determinate length, and the exact Quantity of Time that is spent in that Motion; from which, those excellent Machines called Clocks and Clock-IV rk are made and regulated; for it is found by Experience that a Pendulum, whose length from the Poi t of Suspension to the Center of the Ball, is 39 Inches and 2 tenths of an Inch, Vibrates r Beats, Seconds, or 60 times in one Minute; and for the Certainty and Excellency thereof, it is called The Royal Standard: for it is demon-

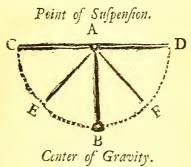
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strated, that all lengths of Pendulums are to one another, as the Squares of the Times of the several Ojcillations.

Scholar. Pray tell me, who first discovered to us the Dostrine and Use of Pendulums; and

bow they are made?

Mafer. I am told by Des Cartes, Kercher, Moreley, Bacon, Digby, Malcolm, Holder, Sir Ijaac Newton, Mr. Derham, Martin, and several others, too tedious to mention, that Pendulums, were first observed, and brought in use by the ingenious Galileo; which may be made thus:



#### EXPLANATION.

First, Take a Wire or String, of any Length you please, and sasten a Weight or Plummet at one End; then make a Hole or Noose at the other End, and hang it on a Nail, Point or Center; and it will hang perpendicular, as from A

to B.— Then draw up the Ball or Plumet (so high from the Center of Gravity, as the Length between the Point of Suspension and the Center of the Ball) towards the Point of the Semicircle C. and let it fall, and it will oscilate or swing towards D; and then come back again towards C. and move both Course and Recourse, i. e. forwards and backwards 'till it rests perpendicular at the Center of Rest or Gravity, B: Its Point of Suspension being A.

Here you are to observe, that, tho' the Plummet ranges a greater Compass between C and D, than it does between E and F, yet it always moves in Equal Spaces of Time both sorwards and backwards, till it rests on its Center B: for the wider Compass it ranges, it moves more swift, and in the very same Time as when its Range is shorter; for the larger the Body is, the more flow in proportion it moves.

N. B. That whenfoever I fpeak of Oscillations, or Vibrations, I mean the Course and Recourse of the Plummet from Side to Side, being the Extremity of its Range; and not the Cen-

ter B, by which it passeth.

Scholar. Sir, of what Length must I make a Pendulum, in order to beat the true Time of the several Notes of Musick; as the Semibreve, the Minim. the Crotchet, &c.

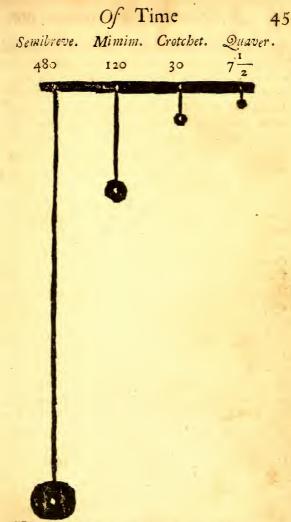
Master. In Page 25, I told you that Four Pulses of the Pendulum was the length of the Semibreve, two the Minim, and four the Crotchet,

&c. I

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&c. I then suppose the *Pendulum* to be 2-1 bout 30 Inches long, which *Pulses* are said to be almost the 60th part of a *Minute*, or nearly the Space between the *beat* of the *Pulse* and *Heart*; the Systole or Contraction answering to the Elevation or listing up of the Hand, and its Diastole or Dilation, to the letting it down, &c. The like being understood of the *Pendulum* both *Course*, and *Recourse*, in such a certain Space of Time.

Now, I say, suppose a 30 Inch Pendulum should vibrate as the length of a Crotchet, then will one of 120 Inches be required to beat one Minim; and one of 7 Inches and a half to the Time of one Quaver; and 480 Inches to compleat the Time of one Semibreve, &c. Always observing, that a Double length of Time, requires a Pendulum four times as long; and a balf of Time but one fourth so long: This being the true Proportion by which all Pendulums are regulated: But, that you may the better understand this Dostrine of Pendulums, and apply them to the several Characters of Musick, in order to shew the true and exact Duration and Length of Notes, observe them in their proportional Length of Inches, as follows:



Had you these 4 Plummets compleatly fixed, so as to move freely without any Obstacle, and

and in proportion both in Length, Weight, and Bigness, according to the Scale before-mention'd; and could you possibly put all in motion together with one touch (as before taught) what a fweet Agreement would there be in their Vibrations, could you hear, as well as fee them; each meeting or uniting in their Courses according as they are in perpertien one to another:
The Minim being as 2 is to 1, to the Semibreve, beating twice to once of the Semibreve; the Crotchet, twice to once of the Minim; and the Quaver, twice to once of the Crotchet, &c. -And from this very Destrine, is comprehended Concord and Discord, from the Uniformity, or Deformity, of the uniting of the Vibrations of the feveral Tones sounding together at one and the same time, &c. (But more of this by and by.)

In this manner many Secrets may be discovered by this noble Instrument, the Pendulum; viz. To know how long time a Stone is falling frem any high Place to the Ground, or, how long Sound is passing from one Place to another; and many more, too tedious to mention: But as this does not concern this Science any farther than what is before hinted, I shall here conclude this Chapter.

What long bath been conceal d as bidden Treasure, Thou bere mayst see, and read it at thy leasure; These Rules will be of general Use to all, And show what we do Time and Measure call.

I value not what carping Criticks say, Nor gilded Dons, that I should here display The naked Truth; let Dogs hark on in vain, I've broke the Teeth of that imposing Strain.

Our Musick-men, bave long been kept in Slavery, Ev'n in the Dark, by their false Teacher's Knavery: A shocking Aspect! when we're taught by Fools, Who know not ev'n the least of Musick-Rules.

Ev'n some there are, who argue and contend, And do find Fault with what they cannot mend: Such Fools, if silent, might for wife Men pass, But by the Braying, all Men know the Ass.

Nay, some I've known, who oft have made a Choice On any One, that had a pleasing Voice, Tho' void of Skill; such tuny Cars will bark, But always leave their Pupils in the Dark.

But far from this: — Such as do take Delight In Musick's Art, and fain would know aright The vicest Rules, and all that doth belong, May here find Aid, to Tune and Time their Song.

CHAP

#### CHAP. IV.

Of Tuning the Voice; and of Accents: Of Intonation, and of the Use of the Pitch-Pipe.

Scholar. S IR, Having made myself a tolerable good Timist, by the Rules of your last Chapter. I still want farther Assistance in Tuning my Voice; and kope you will be as ready to instruct me in that, as you have been in the very first Principles: But you know, Sir, my Voice is very indifferent.

Master. Though your Voice may be rough and shatter'd, yet Practice, perhaps, may make it better; for most People general do those Things best they are most accustom'd to; but, in Vocal Musick, a good Ear, is better than a

fine Voice, and a bad Ear.

Scholar, Why have some Persons a good Ear, and Voice agreeable; and others a bad Ear, &c. and found contrary to others almost in every Degree of Sound, unless they hit on a Sound by chance; and why do some others, not love Mufick?

Master. This is the most sublime Question that can be ask'd in Musick; and better becomes an accute Anatomist to answer, than any practical Musician whatsoever; nevertheless, I will give my Opinion about it; hoping all will excuse my not being greatly acquainted with the Terms of their Art. Iam I am inform'd by the Learned (and particularly Dr. Willis) that there is a certain Nerre in the Brain, which fome Persons have, and some have not; and that such Nerves are compos'd of small Fibres, such as the Nerves of the Ear are compos'd of, &c.— Now, if these Fibres are impersect, why may there not be a Desiciency in some Persons in the Auditory-Nerve? which Nerve conveyeth Sound from the Tympanum to the Understanding; which Nerves are put in Motion by the least Vibration of Air.

—And as it is faid, that this Musical-Nerve hath a Conformity with, and commandeth the Voice to express any Tone transmitted to it from the Vibrations of the Air's striking against it; well may they, who are endowed with this Nerve, be said to have a good Ear; and they that have it not, be said to have a had Ear: and some to have a greater dislike to Musick than others, &c. But this very rarely happens; for the Italian Proverb is, "God loves not him," whom he hath not made to love Musick."

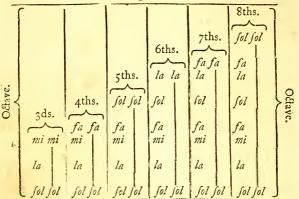
But to give you Directions for Tuning, first look back on pize 6, and regularly ascend and descend the Eight Notes according to the Diatonick-Order of the Scale; and then 3ds, 4ths, 5ths, 6ths, 7ths and 8ths; (proving the true Distance by the interposing Degrees) and then descend again; always having true Regard to the two Natural Semitones, or to sing every Fa flat or faint) according to the following RULES:

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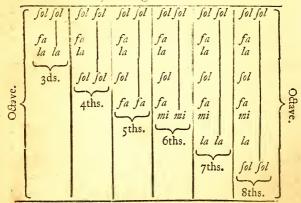
#### RULE I.

A Scale of Musick, for Tuning the Voice.

Ascending Intervals.



Descending Intervals.



Then, if you please, fing the same Sounds again by Letters, which will be a means to make you thoroughly acquainted with the Gamut; remembering always their Places on the Lines. &c. and then sound the several Intervals without proving by Digrees, 'till you can do the whole perfectly, both by way of sol-fa, and by way of Letters.

This Rule well Tun'd, and Learnt by Heart,
Will teach you ev'ry Sound, and Part.

#### RULE II.

Two Sounds in one Tone.

Octave.

1—GG fol fol—GG fol fol—1

2—FF fafa—FF fa fa—2
3—EE la la—EE la la—3

4—DD fol fol——DD fol fol—4

5—CC fa fa——CC fa fa—5
6—BB mi mi—BB mi mi—6

7—AA la la——AA la la—7

8—GG fol fol——GG fol fol—8

Treble, or Counter, or Tenor, or Bass.

By this Method you may found as many Notes on one Tone, as you please, &c. But next next proceed to some plain Tune, which will be as easy as any Example that can be given, &c. always observing to tune your Voice as often in the Flat-Key, as you do in the Sharp-Key: But of this you'll know more when you come to Transposition.

This Rule directs how many Notes (or one)
May still continue in the self same Tone. Thus much for Tuning the Voice.

## § 2 Of the Accents in Musick.

Scholar. SIR, Pray what is meant by the Word Accent?

Master. in common Speech, the Word Accent, fignifies the Tone of the Voice; of which the Grammarians have fundry Sorts, mark'd by various Dashes over the Vowels; signifying a more kigh or low, longer, or shorter Tone of the Voice; or a more pressing Emphasis, or Tone, on fuch Syllables or Words, as are more to be taken Notice of than any other; in order to frike fuch Vowels, Words, Sallables, or Sentences more pressing to the Audience; according as the Paffion and Subject requires, &c. - So in Mafick

An Accent is a fort of wavering or quavering of the Voice, or Instrument on certain Notes with a stronger, or weaker Tone than the rest, &c. to express the Passion thereof: which renders Musick, (especial Vocal) so very agreeable to the Ear; it being chiefly intended to move and affect; and on this the very Soul and Spirit of Musick depends; by reason it touches and causes Emotions in the Mind, either of Love, Sorrow, Pitty, or any other Passion whatsoever, &c.—And this is what is called the Accented, and Unaccented Parts of the Measure; which the Italians call Tempo-Buono, or Time-Good: and Tempo-Cattivo, or Time, or Measure-Bad: that is to say, the good, and bad Parts of the Measure.

Scholar. In what Parts of a Bar of Time is

the Accented Part of the Measure?

Master. in Common-Time, the sirst Notes of the beginning of a Bar, and the sirst Notes of the last half of the Bar is the Accented Part; that is, the 1st and 3d Crotchet of every Bar; the rest being the Unaccented Parts: But, in Tripla-Time (where Notes go by three and three) the sirst of the three is the Accented Part, and the rest the Unaccented.

The Accented Parts should be always as fall of Harmony as possible, and as void of Discords as may be, in order to render the Composition the more affecting: But the Unaccented Parts may consist of Discords and the like, without any great Offence to the Ear, &c. This being a Part of Musick that sew, or no Authors have very rarely mention'd; although it is the whole Ornament and Spirit of every Composition, especially when any Person performs alone.

In Common-Time, remember well by Heart,
The First and Third is the Accented Part:
And if your Musick Tripla-Time skould be,
Your Accent is the first of ev'ry three.

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§ 3. Of Intonation; and of the Use of the Pitch-Pipe, and its Original.

Scholar. S IR, Pray tell me what is meant by the Word Intonation?

Master. Intonation, properly fignifies, the giving of the Pitch, Tone, or Key of the Composition, &c. which is generally done by an Instrument, or Tone of the Voice, by the head Performer, in order that the rest of the Singus may set their Voices in that Order before they begin the Composition; for which a Pitch-Pipe is of excellent Use.

Scholar. How shall I know the right Sound of any Key, so as to sound it neither too high, nor

too low?

Master. If you would Key a Composition of various Parts for any Quire or Company of Singers, and have not a Pitch-Pipe, nor any Infrument depending, First, take a View thro' the whole Composition, and try if you can sound the highest Notes of the upper Parts above the Key-Note, and also the lowest Notes of the Bass-Bellow; which if you can do without squeaking or grumbling, and all other Voices perform clear and smooth; then may your Song be said to be pitch'd in a Proper Key; for it is a general Maxim among Musicians, That, " A Tune well Key'd, is half sung:" But oh! how intolerable is some Psalmody perform'd in many Places, for want of Judgment in this Point! whose Leaders are so stupidly conceited, as not to use a Pitch-Pipe! for it is daily found by Experience

Experience, that *Psalmody* is very rarely well perform'd without it, unless by mere blind Chance; and on the contrary very compleat, where they always make use of it.

Scholar. Many there are, that refuse the use of a Pitch-Pipe, and say, it is nothing but a late whimsical Invention: Pray tell me how long this

Instrument has been in Vogue?

Master. If you would cast your Eye into the Writings of primitive Authors, you'll find, that Anastasius, Pope Leo, and St. Hilary (Bishop of Poitiers, who is faid to be the very first that composed Hymns to be fung in Churches; and was followed by St. Ambrose,) and several others, erected several Musick-Schools, called Schola-Cantorum; and that fuch Tunes as were antiently fung, were called Chants; as, the Amprofian Chant, the Gregorian-Chant, &c. from the Authors who composed them; which Tunes were fung in Unison by the whole Congregation; and that some of which might the better begin, and keep up the Key or Tone (which they call Tonos, in Greek; Tonus in Latin; or Tone, in English) they thought it convenient, to have a Bell, or a large Organ-Pipe, whereon a Person for that Purpose used to sound the Tone of the Key to the Congregation, always beginning, and ending the June; and often founding in the Middle, if it was thought fit; in order to keep up the Quire to the true and Regular Pitch; which Key or Jone is a certain Determinate, Dominant, and principal Degree

of Sound, which regulates every Tone, proportioned to the Voices. The Practice of this, was greatly recommended by the learned Benedictines, in a Treatife wrote by them, in the Year 1673; who also charged the Organist often to found the Key in many Places, to keep the Tone thereof always in the Peoples Memory: which Mr. Bossard says, is the very best Method that ever appear'd in the Practice of Divine-Musick.

Thus, you see that a Pitch-Pipe, in Likeness, is a very Ancient Instrument, and greatly approved of by the Learned; tho' it has been but little in Vogue with us, 'till within these 20 Years; for I remember I went feveral Miles to see the first I heard talk'd of: which Instrument is greatly improved to what it was in former Days; and is of fingular Use in all Kinds of Musick, i. e. for setting of many unfix'd Instruments in Tune, as well as in Vocal-Musick; we having it now so as to carry in a Pocket, and on whose Register or Stop, is mark'd the several Letters of the Scale of Musick; which Tones, either Flat, Sharp, or Natural, being given by drawing the Register, which enlarges the Tube, or Cavity so as to contain fuch a Quantity of Air, as will produce any Degree of Sound, whether Grave or Accute, &c. But I shall say more of Air, when I come to treat of The Nature of Sound.

Scholar. Must the Register always be set to the

Letter of the Key of the Composition?

Master. It is generally set thereabouts, but it may be varied half a Tone higher, or lower, it it better suits the Voices; by reason, every Author setteth his Musick on what Key he pleases; tho' some too high or too low, without regarding whether it best suits the Voices or not.

But it was always my Nethod first to found my Musick on su h Keys as best suited the Compass of all Voices, both above and below; and then, if I found the Parts would move smoother, half a Tone higher, or lower than the Letter of the Key, I then set a Direction over the Composition, in order to direct the Quire how to set the Register of the Pipe accordingly: But our new Consort-Pitch is more fitter for Vecal Performance than the old Consort Pitch, which is half a Tone lower. See my Universal Harmony: Containing the whole Book of Psalms all new Set, in Four Parts, with variety of New Authorns. &c. Price bound 4s. 6 d. Octave.

This Instrument Some Teachers do refuse, And laugh at Things, they know not how to see: So self-conceited Fools deem all Things vain That others do; which they cannot attain.

Such Paper-Skulls, much better had been mute, Unless they were more able to despute, And speak with Judgment:—But, alase! see had, These Tongues ran mos, whose Brains lie most bekind. 58 A New Musical Grammar, &c.

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#### CHAP V.

The Scale of Musick for several Instruments; with conpendious Instructions thereunto.

In 1. Of the Organ, and its Antiquity.

Scholar. SIR, Having often heard of the grand Structure and Tone of an Organ, I now define you would give me a short Description of it; and also of its Antiquity.

Master. The Organ, is the largest, and most Harmonious Wind Instrument of any other; it being a Collection, or Imitation of all other Instruments whatsoever, such as Trumpets, Hautboys, Flutes, Cornets, &c. and differs as to Largeness, Tone, and Ornament, according to the Art of the Builder, and Charge laid out upon it.

The Organ is said to be a very ancient Invention, even almost as ancient as Adam, as is recorded in Gen iv. 27. where Jubal the 6th is said to be "The Father of all such as bandled" the (Harp) or Organ": Yet it is agreed that it was little used 'till the Eighth Century; and seems to be borrowed from the Greeks.

Ctesbes of Alexandria, in the Reign af Ptolemy Evergetes, about the 3782 d. Year of the World, (or 166 Years before Christ, being about 1912 Years ago) is said to be the very first that invented such Organs that play'd by compressing the Air with Water; which is still practised in many Places; which were greatly improved by Archimedes, and Vitruvius; Vitruvius describing an Hydraulick-Organ, in his 10th Book of Architecture, or an Organ that play'd by Water: The Emperor Julian had an Epigram in Praise of it. There are several Hydraulick-Organs in Isaly, in the Grotoes of their Vineyards, &c.

St. Jerome mentions an Organ that had 12 Pair of Bellows, which might, with ease, be heard 1000 Paces, or one Mile; and another at Jerusalem, which might be heard from thence to the Mount of Olive:

I am inform'd, that there is a large and beautiful Medallion (or a Medal of a very large Size) erected by the Valentinians, in the Cabinet of Queen Christina; and that on the Back-side thereof, is a fine Hydraulick-Organ, with two Figures, representing two Men, one on the right Side, and the other on the left, seeming to pump the Water that plays it; and to listen to the Sound of it: It having only Eight Pipes, erected on a round Pedestal, with this Inscription: PLACEA SPETRI.

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There is also an Organ in the Cathedral of Ulm, in Germany, that is 93th Feet high, and 28 broad; the largest Pipe being 13 Inches Diameter; and has 16 Pair of Bellows.—The above Account I have vopied from many curious and credible Writers.

Scholar. I return you Thanks for this Historical Account of the Organ; but now defire you'll

say formething concerning its Structure.

Master. As to the Structure, that is best described by such as build them; nevertheless, I will give you the best Account I amable, which I acquired by being conversant with many Organ-Builders in London, and also by reading such Authors as wrote entirely on this Subject, which is as follows:

## Defcription of the Organ.

Our Modern Organ is greatly improved to those in sormer Ages, consisting of a Buffet, containing various Rows of Pipes: The Size of an Organ being always from the length of the largest Pipe; whether it be of 32 Feet, 16 Feet, 8 Feet, 4 Feet, or of 2 Feet, &c. And the Quality of Sound depends on the Width and Length of the Tube or Pipe, Tongue and Reed, &c. whether the Tone be more or less Grave, or Acute.

Our Church-Organ hath Two Parts, viz. The Main-Body, or Great-Organ; and the Polive-Organ,

Organ, or Little-Organ; which is generally placed before the Great-Organ.

When an Organ has but one Body, it has but one Set of Keys; but when it has a Posive-Organ, then it has two or three; and some large Organs have four, or five Sets of Keys; and some large Pipes have Pelals, which are put down by the the Feet to lift up the several Keys, Stops, or Teuches thereof.

The several Keys of an Organ are generally divided into four Octaves, (or sour times Eight) the first Octave taking 13 Pipes, or Keys, to compleat the 12 Semitones of the Octave (and also the last Octave) but the inner Octaves take not so many, by reason, that Pipe or Key which endeth one Octave, beginneth the next, &c. which four Octaves are termed thus:

First Octave. ---- 1. Middle Octave. --- 2. First Sub-Octave. --- 3. Second Sub-Octave. --- 4.

N. B. That the Word Sub, is a Latin Word, and fignifies Below.

Each of these Four Octaves is divided into 12 Stops or Frets, 7 of which Keys being Black, which give the Natural-Tones, and 5 White, for the Artificial Flats, or Sharps; so that the whole contains 48 Stops: But some Harpswords, and

and Spinnets have the Natural-Keys White; and the Artificial ones Black; and some Organ-Builders have added a Third Sub-Octave, or Pedals of two or three Octaves lower; so the Number of Stops or Octaves on an Organ are as the Builder's or Organist pleases, &c.

Our Organ-Builders, or Harpsichord-Makers have a Scale or Diapason, whereby they regulate the Lengths, Thickness, Tension, &c. Having a large C at the End of a Line, and by looking into the Table or Scale for such a C, they find that the Line so mark'd, is the Measure of the Pipe or Chord destined to sound the ut, or C, of the lower Ostave; but it a small c, it is the 2d

Offave; if c, the 3d Offave; and if c it is the

the Sound of the 4th Offave, &c. and from this Scale, Rule, or Diapason, our Musical Instrument-Masters adjust the Pipes of their Organs, cut the Holes in their Flutes, Hautboys, &c. in a due Proportion; in order to perform any Tone, or Semitone, &c.

N. B. That if a Square be divided into 8 Parallelograms, the Points wherein a Diagonal Line interfects all the Parallelograms will express all the prastical-Intervals in Musick; and on this Principal is the Diapason sounded.

To play on an Organ, is, to press down the feveral Keys or Stops with the Fingers, (or if Pedals.

Pedals, with the Feet) in order to open the feveral Valves or Plugs, which correspond lengthwife with as many Holes as there are Rows of Pipes on the Sound-Board; the Holes of each Row being opened and shut by a Register or Ruler, pierced with 48 Holes; and by drawing the Register, the Holes of one Row are all opened; because the Holes therein correspond with those of the Sound-Board; so by opening a Valve, the Wind brought into the Sound-Board, (by feveral Pair of Bellows) finds a Passage into the Pipes; which corresponds to the open Holes of the Sound-Board: But by pushing the Regifter, the 48 Holes thereof, (not answering to any of those of the Sound-Board, that Row of Pipes answering to the pushed Register) are sout. &c.

Hence it is, that by drawing several Registers, various Rows of Pipes are opened; or several Rows together, if the same Register corresponds thereunto; from which the Pipes become either Simple, or Compound.—Simple, is when one Row answers to one Register; and Compound, is when one Register answers to several Rows: Hence the Organists say, that A Row is Compound, when several Pipes sound or play together, by only pressing down one Key or Stop; according as the Holes and Register have Communication with each other, &c. But of these Keys, I will give you a Scale by and by, &c.

one Sort, whose Mouths are like Flutes; and the other Sort with Reeds. The first, are termed Pipes of Mutation, and consist of a Foot, which is a hollow Cone, which receives the Wind that is to give the Sound; and to this Foot is fastened the Body of the Pipe; between which Foot and Body is a Partition, which hath a little long narrow Arperture or Opening, to let out the Wind: and over which Arperture is the Mouth, whose upper Lip being cut level, cuts the Wind as it comes out; which Cutter gives the Sound, by the Wind striking against it.

Some Pipes are made of Pewter, and some of Lead mixed with a 12th Part of Tin, which are always open at their Extremities; their Diameter being very small, and the Tone very sorill; but those of Lead mixed with coarser Metal, are more large: the short Pipes being open, and the long ones quite stept; and the middle-siz'd Pipes are a little flopt, having a little Ear on each Side of the Mouth, to draw closer or farther off, in order to raise, or lower the Sound, &c. So the finer the Metal, the smaller the Pipe.

The Wooden Pipes are generally made square, and floped at their Extremities with a Valve or Fampion of Leather; the Tone of the Wood Pipes being very soft, as also they that are made of Lead; the longest Pipes giving the gravest Sound, and those more short, are more Acute; so that both their Lengths and Widths, are proportioned.

proportioned according to the Racios of their Sounds; which are adjusted and regulated by their Rule and Diapajon, as I before hinted; and those Pipes that are spen; but the Pedal-Tubes, or Pipes, that are open; but the Pedal-Tubes, or Pipes, that are play'd by the Feet; are generally open, if they are made of Wood, or of Lead; and the longest Pipe of a good Church-Organ is commonly 16 Feet long, and in some very large Organs, 32; all the other Pipes being selfened in proportion to the largest, or Grand Pipe, &c.

Such Pipes as are called Reed-Pipes, confift of a Foot, which conveys the Wind into the Shallet or Reed, which is a hollow half-Cylinder, and fitted at the Extremity thereof into a kind of Mould by a wooden Tampion; the Shallot or Reed being covered with a thin Bit of Copper fitted at it's Extremity into the Mould by the fame Wooden Tampion; it's other Extremity being fo at Liberty, that the Air enterting the Shallet or Reed; to that, that Part of the Tongue may have more Liberty, by making it longer; and the longer ic is, the more Grave is the Sound; The Mould, which serves to fix the Shallot or Reed, the Tongue, and the Tampion, &c. ferves also to stop the Foot of the Pipe, obliging the Wind entirely to pass thro' the Reed; into which Mould is soldered that Part called the Tube, whose inward opening is a Continuation of the Reed; the Form of this Tube being different, according as the Pipes are in different Rows, &c. &c. &c.

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Instructions

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## Instructions for the Organ.

Having thus described that most curious and barmonious Structure, the ORGAN, so far as my Ability will admit, from both seeing, reading, and conversing with such as build, and perform on that noble Instrument; and also by consulting such as have wrote on the same: I shall in the next Place, refer you to the sollowing Plate, which is The Scale of Musick, on the several Keys of the Organ, &c. whether Natural, Flat, or Sharp; whereby you may know, and perform any Degree of Sound; and also many Parts together, &c.

AND THE CONTRACTOR

The Scale of Mufick for Organ, or He Left Hand.



## Explanation of the Scale.

In this Scale, the Natural, or Proper-Keys are Black, all 8ths or Octaves being the very same in effect as was before; and the two Natural-Semitones, (being from B to C, and from E to F,) are placed on the Black Keys in their Regular-Order: But the Semitones are White, and placed between the Whole-Tones; one of which serving for either Flat, or Sharp; A-Sharp, being struck on the same Key as B-Flat, and so of all the rest.

The Keys of an Harpsichord or Spinnet, lie in the very same Order as those of an Organ, which Keys move the Facks, which strike the Strings; this being the most curious and harmonious Instrument of the stringed Kind.

In Fingering, observe, That on the Right Hand, the Thumb is called the first Finger, &c. and on the Left Hand, the Little Finger is called the first; and that those Fingers as are to Ascend, on both Hands, are the 3d and 4th Fingers; and those to Descend are the 3d and 2d; and so on to the 5th of either Hand, &c.

To play well on the Organ, Harpfiehord, or Spinnet, is learnt from a diligent Practice, and by being thoroughly well acquainted with the Gamut, Time, and all other Characters belonging to Musick; and so well acquainted with Concord, and Discord, as to see through the whole

whole Composition, in order to strike all the Parts together; for which Instruments, all Missick in Parts ought to be set in Score; that is, all Parts one under another, and Bar against Bar.

## Of the Thorough-Bass.

The greatest Performance on these kind of Infriuments, is the Thorough-Bass, it having Figures placed either over, or under the Notesthereof, in order to direct the Performer tostrike in such Cords, Notes, or Parts from the Ground or Bass; such as 2ds, 3ds, 4ths, 5ths, 6ths, 7ths, or 8ths, &c. For which Reason the Performer ought to be well verst in the Rules of Composition, &c.

It is to be observed, that where single Flats, are only mark'd, that those Flats or Sharps denote that you are to play Flat or Sharp Thirds; and that where nothing is mark'd, then Common-Concords are to be play'd, &c.—Also where 4ths, 7ths, &c. which are Discords, are only mark'd, they are only set to introduce other Common-Concords to sollow; that is, such as lie next, or the nearest Interval to sollow, as the Rules of Composition will admit.

And altho' many Authors do only mark their 3ds with fingle Flats, or Sharps; and also 4ths, 6ths; 7ths, &c: and omit the Figuring of the Common Concords, (which are 5ths, 8ths, 12ths, 15ths;) yet it would be more ready for every young:

young Beginner to have them figured over or under the Notes; which might probably prevent many Mistakes.

Observe, that neither Two-Fifths, nor Two-Eights are to be play'd together, neither Rising nor Falling; (as well as not in Composition)'s therefore the best Way to avoid them, (or any other Consecution of Perset's of the same Kind) is, to move your Fingers contrary one from another, as much as possible; and in so doing, you will certainly avoid many Errors that you otherwise might run into.

## Of Tuning the Organ, Harpsichord, or Spinnet.

Scholar. S IR, I thank you for this Historical Account of the Organ, Description, and Instruction: But now desire you'll favour me with a little farther Instruction on Tuning of them.

Master. The part of Tuning only depends on a good Ear, and is very difficult on some certain Notes, such as E-flat, D-sharp, &c. But it is general the usual Way of Organ-Builders, Harpsichord-Makers, &c. First, to Tune C-solfaut by a Consort-Pitch-Pipe; and then an 8th either above or below it; and after that 3ds; 5ths, &c. and all Degrees that are in the System of Ottare. But the better to explain this, observe the sollowing Table:

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ATABLE for Tuning either Organ, Harpficord, or Spinnet.

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(N. B. This Mark \* fignifies a Sharp-)

Observe, to Tune all Sharp-Thirds, as sharp as the Ear will admit; and also all 5ths Bearing; that is as flat as possible: which will render your Musick the more Grand and Harmonious: And often, by way of Tryal, touch Unison, Third, Fifth, and Eighth altogether; and also Unison, Fourth, and Sixth: And lastly, if every Octave of your Keys, both Proper-Notes, and Semitones, sound perfect Eighths to each other, then you may conclude, that your Instrument is in perfect Tune, &c.

A Table of all the Intervals contained in the System of Diapason or Octave; with the Numter of Semitones in each Interval; according to the Names of the several Keys of an Organ, &c.

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Observe, That the Particle Semi, in Semidiapason, Semidiapente, Semiditone, &c. in the Pable before, does not mean the Half of such an Interval; but signifies, that it wants a Semitone of its Persection: The Semidiapason, and Greater Seventh, being both but one Interval; and include each the same Number of Semitones; in like manner is the Greater Fourth, or Impersect or Minor-Fifth.

## 9.2. Of the Violin, 1900

fprightly of all other Infruments; and is above all others the fittest for Dancing: and may be handled so by the Violst, or Performer, as to cause the Notes thereon to be either cheerful or soft; or Forte, or Piano, that is strong, or as an Eccho, &c. which depends on the artful Management and Dexterity of handling it, both in moving the Bow, and Fingering of the Strings, &c.

This curious and unfix'd Instrument, consists of Three Parts, viz. The Neck, the Table, and the Sound-Board; it having four Strings fasten'd to the two Extreams, with four Screws in the Nutt or Head, in order to raise, or to lower the Tension of the Strings to any Degree or Pitch whatsoever; or according to any fixed Instrument that performs or plays along with it.

Of these kind of Instruments, there are many Sorts, all of which differ as to Size, and some in way of Tuning; tho' all struck with a Bow or Fiddle-frick, made of stiff Hair dress'd with Rosin, which grating against the Strings, puts them into a vibrating Motion; which gives the Tone higher or lower, as regulated by touching them with the Fingers.

The Viol di Gambo, or Leg-Viol, (fo called from its being held between the Legs) is what we call our Bass-Viol, having six Strings, called, iff The Treble; 2d Small-Mean; 3d Great-Mean; 4th Counter-Tenor; 5th Tenor, or Gammut-String; and the 6th The Bass-String; being tuned thus: The rst D—, 2d A—, 3d E—, 4th C—, 5th G—, and the 6th is double D D—.

In former Days they used to have whole Chests sull of these Kinds of Instruments, which they called Setts; such as Trebles, Counters, Tenors, Basses, and Double-Basses, all of which were mounted with 6 Strings, as Viola-Tenor, A Tenor-Viola,— Viola-Basso, A Bass-Viol, &c. &c. But as these Kinds of Bass Instruments, are now partly laid aside, I shall say no more about them; but go on with what I designed, with

## Directions for the Violin

The Treble-Violin, is strung with four Gut-Strings, on which may be play'd any Part, either Treble, Counter, Tenor, or Bass; but it generally performs the highest Parts of Concerts on Occasion. The The four Strings are Tuned Fifths to each other, viz. The Treble or 1st String, is E.— The 2d or Small-Mean, is A. — The 3d or Great-Mean, is D.— And the 4th or Bass-String, is G.— Each being 5 Notes distant from one another; on which 4 Strings is performed these Notes, whether Natural, Flat, or Sharp, viz.

The Gamut on the four Strings.

Thus, you see what Notes are play'd with each Finger, on all the 4 Strings; but when any Note is play'd flat, you must lengthen the String by sliding the Finger half a Tone lower towards the Nut, than the Natural-Note; and so on the contrary, you must shorten the String by sliding it half a Tone higher towards the Bridge; to sharp a Note. But the better to explain what I have said, I will set you an Example by Notes; being

of the Violin. (77)

# The Scale of Musick on the four Strings of the Violin.



Example of Tuning.





First, Observe to have the Strings of your Violin in persect Tune, so as to sound the Tones before mentioned; for unless they are Tun'd regular, no one can can play thereon, be he ever so dexterous; and also to play every Lesson or Tune, very sow at first; for a diligent Practice will bring your Hand to a more swift Motion: Psalm-Tunes being the best for young Beginners.

For the Nicety of Fingering, observe, that whenever you skip a Fret or Stop, there to leave a Finger, for a Stop is but half a Tone or Note; for from B to C. and E to F. are but half Notes; and all the rest are whole Ones; and to leave a Finger is necessary, to be in Readiness when any half Tone shall happen, either by Fats or Sharps.

In Bowing, observe to play any even Number of Tied Notes by striking the Bow up; such as 2, 4, 6, 8, &c. and to play any odd Number of Notes tied together, with the Bow drawn down: I mean, to begin such Even or Odd Numbers tied together, with the first up, or down, &c. and also to learn the use of all Moods, Flats. Sharps, and other Characters contained in this Book; belonging to practical Musick, &c.

## 9 3 Of the Flute.

HE Flute, is a Pipe Instrument of Mu-fick, and blown by the Mouth; having Eight Holes, seven on the Top, for the Fingers; and one underneath for the Thumb of the Right Hand; which Tones are changed by flopping and opening the Holes; placing your 3 first Fingers of your Left Hand uppermost towards your Month; and the 4 Fingers of your Right Hand towards the Bottom, and blowing at the same time, you'll have a Production of these-Sounds :

#### The Gamut on the Flute.

F- All Holes stopt close, and blow gently.

G-Take up the little Finger of your Right Hand.

A-Take up the 2d Finger of your Right Hand.

B-Up the first, down the 3d and 4th of your Rt. Hand.

C-Up the 2d and 4th of your Right Hana. D-Up the 3d of the Left Hand.

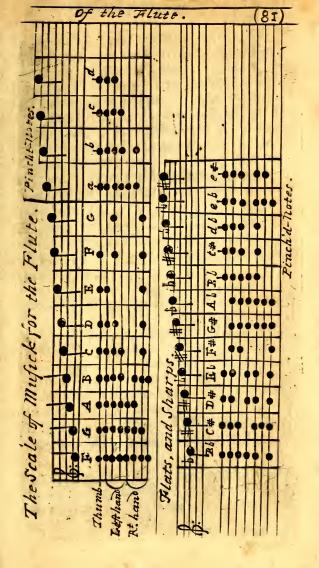
E-Up the 2d of the Left Hand.

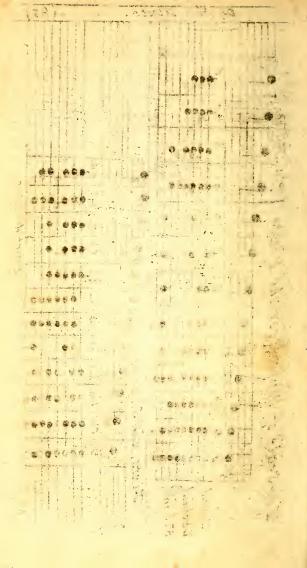
F-Up the 1st, and down the 2d of the Left Hand.

G-Take off the Thumb of the Left Hand.

A-Place the End of your Thumb in the Hole to half cover it, and with the 1st, 2d, and 3d Fingers of your Left Hand stop the 3 upper Holes, and the 1st and 2d Fingers of the Right Hand on their proper Holes, and blow hard .- This is the first Pitch'd-Note, and you must keep your Thumb End in the Hole to these ensuing; viz.

B—Up the 1st Finger of your Right Hand. C—Up the 2d Finger of your Right Hand. D—Up the 3d Finger of your Right Hand.





By this Scale, you see how every Hole is flopt, and opened, in order to make any Degree in the Scale of Musick. Now it lies on your Part to put in Practice all the Terms and Characters belonging to Musick, in order to make you a good Proficient; always observing that the lowest Note on the Flute is F; and that what Keys are not in the Compass, must be transposed higher or lower to bring them into the Bounds of the Flute; which Part of Transposition you'll better understand when you've read the next Chapter.

Of Flutes there are many Sorts, as a Confort-Flute; a Third-Flute; a Fifth, and a Sixth, and Offave-Plute; yet all may be play'd by the

foregoing Rules.

Scholar. Why was this Instrument called

Flute?

Master. The Latins anciently called these kind of Wind Instruments, Tibia, and Fistula, which signified a Pipe, being their ancient and principal Wind Instruments; but how they were constituted and play'd on, 'tis not known. Borrel derives it from Flutta, that is, a Lamprey, call'd Fluitando in Fluviis, by reason the Flute is long, with Holes along it, like that fort of Fish.

The ancient Flutes or Fifulas, were first made of Reeds, and afterwards of Wood, and some of Metal, but how they were blown it does not

appear.

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Some of the first Flutes had but very few Holes, and some had none at all; some were only single Pipes, and others were many Pipes join'd together.

We read, that Pan's Syringa consisted of seven Reeds bound together Side by Side, having no Holes in any of them; yet they were all of seven different Sounds or Tones; which some will say were tun'd according to the seven Letters of our Diatonick-Scale, the Octave not being then found our.

Our German-Flute, is quite different from our Common-Flute, its End being stopt up with a Tampion or Plug, having a Hole about 2 of 3 Inches distant from the End, under which the lower Lip is applied, in order to blow it:—It is usually about 18 Inches long, and thicker towards the Mouth-Hole, than at the lower End; having Holes for the Fingers, as well as one for the Mouth; the lower Hole being opened by the little Finger's pressing on the Silver or Brass Key, like those of the Hautboy, or Basson, &c.—The Bass-Flutes are double, or quadruple its Length and Thickness; but those kind of Instruments are partly laid aside, and converted into Bassons, &c.

Thus, I the Organ fully bave display'd
In all its Parts, and how each Part is made:
The Gamut-Scale, I've fix'd on ev'ry Key,
But, Diligence must Teach thee how to play.
The Violin's Notes, I've mention'd, and the Flute,
But, for the rest, at present I there mute.

CHAP

#### CHAP. V.

Of the several Keys in Musick, Natural, and Artificial: and of Transposition.

61. Of the Two Natural Keys.

Scholar. SIR, What is a Key, and what is meant by the Word Key?

Master. A Key (in Musick) is a certain Principal and Dominant Tone, which regulates every Tone else to a certain Degree or Pitch of Acuteness or Gravity; occasioning every Member of the whole Composition to move in a true Decorum; and without which, every minute Part of the Scale would be nothing but Confufion: For as every Branch of a Sermon depends on the TEXT given, even so every Member or Note of a Composition depends on this Dominant Tone, called the Key.

On this Key or Tone (I say) depends the Air and Judgment of the whole Song or Composition; and this is the PRINCIPAL TONE that governs all the rest; and from which Sound, every Distance, above or below it, may be Tunably regulated, so long as this Key, Tone, or Sound is kept in Memory :- But when once the Sound of your Key is loft, and confusedly put out of Mind, then the Whole becomes nothing thing but a Piece of noisy Jargen and Consustation. Like, as (in Geometry) the Bounds of a Circle depend on its Point or Center, even so (in Musick) does very Member of a Composition depend on its Proper-Tone or Key.

Scholar. Sir, I thank you for this curious Difinition; but pray tell me which is the Key-Note.

Master. The Key-Note, is the last Note of the Bass (which is the Foundation of all other Parts, be they ever so many;) all Octaves or Eighths, in the upper Parts, being counted the same in effect, &c. This Key-Note ending the Song, like a Period at the End of a Sentence; for when the Sense of a Sentence is full, nothing else is expected after it, &c.

Scholar. How many Keys are there in Musick? Master. There are but Two, which are call'd Natural or Primitive-Keys, viz. C faut, the Natural-sharp and chearful Key; and A re, the Natural-Flat and melancholly Key: So that no Tune can be prick'd down on any other Key whatsoever, but on these Two, without the placing of either Flats, or Sharps at the Beginning of the Five Lines, in order to change the mi, and regulate the Natural-semitones to the self-same Order: making all Artiscial-Keys the same in essect as the Two Natural-Ones; the Nature of which you may see in the following Table:

An Example of the Natural-Order of the Natural-Sharp-Key. C,

$ \begin{cases} -C \\ -B \\ -A \end{cases} $ $ -G \\ $	-Key		Fa—]
] _A		<i>p</i>	la—
] -G	-		(of-)
-F			fa— la—
			GI-
l-c	Key	I	ra—J

An Example of the Natural-Order of A, the Natural-Flat-Key.

ſ	—A -	Key'	La- \
-	<u>-</u> -G	9	Sol {
1			1
1	<u>-</u> E ⋅		la }
	_B -		
1	-A -	Key	La

By these two Examples, you see the Places of the two Natural-Semitones in every Offave, either in the Sharp-Key, or in the Flat-Key.

Scholar

Scholar. Although you have given me these Examples of the two several Keys you before mentroned, I am fill to seek in the true Understanding of 'em; not having so much Skill as to know the Difference of one Key; from the other.

## Of C the Sharp-Key.

Master. The Difference of the two Natural-Keys are known from the First third, the fixth, and the seventh above the Key-Note: \_\_\_ Suppose your Key be C, as the first Example, count the Number of Semitones in the First 3d, above the Key-Note, saying, C, D, E; or Fa, sol, la; which is a Major or Sharp-Third, containing Four Semitones; and also the Major 6th of Nine Semitones; and the Major 7th, of Eleven Semitones.

## Of A the Flat-Key.

But if your Key is A, as the Second Example, then is your First 3d above your Key-Note, A, B, C; or La, mi, fa; a Minor or Flat-Ibird, of but Three Semitones; and also the Minor 6th, of Eight Semitones; and the Minor 7th, of but Ien Semitones above the Key-Note: But the Offave is always the same again, in any Key whatsoever: You being half a Tone higher in the very First 3d of the Sharp-Key, than you are in the Flat-Key; and, this is, the very Reason, one Key is called starp and chearful:

and the other flat, soft, and mournful: The one being proper for solid and grave Subjects, and the other for Subjects more chearful, merry and sprightly.

(See the Table of Semitones, page 73.)

## § 2 Of Transposition, of the MI.

Scholar. SIR I thank you for your Diffinition of the two Natural-Keys; but now defire you'll inform me how to Transpose, remove, or change them into any other Artificial-Keys,

## MI Transposed by Flats.

Master. To Tran'pose, or remove a Piece of Musick from off one Key, and to set it on another, First, you are to consider, that M i is the Master Nate, and governeth all other Notes in Regular-Order, both aloce, and below it, and cometh but once in every Octave; your Natural Sharp Key-Note being the very next Degree above it, and your Natural Flat Key-Note

the next Tone below it. -- and

Secondly, That the Quality of the MI-Note, is always sharp and chearful, and may be made Flat, by placing a Flat thereon, at the Beginning of the five Lines, which Flat changes the Place of Mi to the Quality of la: Then, if le be there fixed, Mi must of Necessity be Transposed four Notes higher (or five lower) to E, that the natural Semitones may be kept in Regular Diatonick Order: This being called the First Remove by a Flat.

The

The Second Remove by Flats, is, to place another Flat on E (that is, on Mi by one Flat) and then A must be Mi, a 4th above, or a 5th below the Place where on it stood before: Then you have both B and E Flat.

The Third Remove by Flats, is to flat A, and then D is mi; you then having B, E, and A flat; and by this Method, you may by Flats artificially Transpose the Mi to any of the other six Letters in the Scale of Musick, 'till you hunt it home again to its primative Place: Observing, That,

From the last Flat, on Line or Space, Four Notes above, the M I hath Place.

## M I Transposed by Sharps.

To change Mi into la by Sharps on the five Lines, your first Sharp must be on F, and the M. wilt be on F also: Your Mi being always with the last Sharp.

The second Remove by Sharps, is, to place a tecond Sharp on C, a 5th above, or a 4th below the Place of Mi, and then will C be Mi; you

having both F, and C Sharp.

The Third Remove by Skarps, is, to place a Sharp on G, and G will be Mi also; you then having F, C and G Sharp, and by this Method, you may artfully by Sharps place the Mi on any of the other fix Letters, of the Scale, till you chase it home to its first primative Seat, &c.—Observing that,

When that ly Sharps the Mi-Note doth remove, Lost Sharp, and Mi, are both free Notes above.



By this Table, you see the Place of the Mi, on all the seven Letters of the Scale, both by Flats, and Sharps; which Mi-Note. Transposeth all other Notes in Regular-Order both above and below it, the same as they were in the ancient Scale of Musick; only they stand on Different Lines and Spaces.

Scholar. Why was Transposition of the Mi &c. invented; or, why may not Mi be always kept in its primitive Place?

Master. Transposition was contrived to bring every Composition, as near as possible, within the Limits of the five Lines; by reason many Tunes cannot be kept in such bounds, nor yet to be practicable, neither by Voices, nor by Instruments: — For, suppose a Sharp-Key, in C-sol-faut in the Tenor, should rise eight Notes to the Octave or Key above, how could they be prick'd down without two Ledger-Lines above the five; or, how could any Voice perform it, unless I Transpos'd it lower? — Then, is I set a Sharp on F, and place my Key sour Notes lower on G, and prick down all other Notes of the Piece in their regular distance, above and below it, it will stand better in the Compass of the five Lines, and more case for the Voice, and Eye: And this is the very Reason that Transposition was invented.

Scholar. Many there are, who object egainst the last Remove of your Table by Sharps (where E is sharp'd, and becomes Mi;) and say, That D 2 Remove

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Remove is farther than the Rule will bear, and that there is no Places for the two Scmitones, by reason sa should not be sharp'd.

Master. I was once so ignorant myself, and even so consident as to assert it, by the ill Example of others; but since, by Study I know better, let me ask those who object this Remove, these two Questions, viz. 1st. What Difference is there between E Natural and F Natural? To which must be answered, Half a Tone: — and 2dly, What Difference is there between E Sharp, and F sharp? To which again must be answered, Half a Tone: which Questions, I think are sufficient to prove the RULE, to be as good even to the last, as it was at the first setting cut.

## § 3 Of Transposition of Keys.

Scholar. IR, I return you hearty Thanks
for your curious Remarks and Instructions, by which I understand the true Nature
of the Two original Keys, whether Sharp or Flat;
and also the Transposition of the Mi-Note, so as
to make them Artificial: I now beg the Favour of
an Example of the whole together by Notes.

Master. Your demands are much to the Purpose. Therefore I shall grant your Desire, and shew them both Flat, and Sharp, as follows.



Or Peres. il, 1000 For the Andread State of

By these two Examples you see how every Artisticial-Key is Founded, according to the two original Natural-Keys; which when rightly solfa'd according to the Transposition of the Mi, will be the very same in Effect, though the Key be higher, or lower. —— For,

Tho' Fourteen Keys I've written here in View, Those, in Efect, are but the same as Two.

Scholar. Being one Evening in Company with foms Psalmodists, who were Busy in looking over New Pieces of Musick; one amongst the rest, pull'd out a new Book, wherein the Word Anonimous adorn'd the head of many Pages, on one particularly, I saw an old Tune strangely difguis'd, its Key being G, with no Flats, nor Sharps at the Beginning; but the half-Tones were reconciled to the Natural-Key by accidental Flats and it Ended sol.

This Author they extol'd very much, and render'd him really very famous; pray give me your Opinion about that Piece of Musick.

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Master No Man, that has any Judgment in Musick, will ever agree that such a Lessin can be right; by Reason the last Note is neither consormable to the Natural-Flat-Key, nor yet to the Natural-Sharp-Key, it ending neither in La, nor yet in Fa.

Therefore, it is either ignorantly done for want of Judgment, or else only to puzzle the Practitioner: For every Key ought to be founded by Transposition, according to one of the Two Natural Ones.

Sum melior audio incerpatio sapiens;

66 Quam ut audio canticum stolidus.

"It is better to hear the Rebuke of the Wife;
"Than for a Man to hear the Song of Fools."

Ecc. vii. 5.

Scholar. Some Tunes I have also seen, in several Parts, wherein the Mi in one Part is Transposed by Flats, and in other Parts, by Sharps; pray tell me, if that he right or not, the Mi in each Part he on one and the same Letter.

Master. That I have often seen done for Curiofity Sake, only to difguise the Piece, and puzzle the Performer; and tho' fuch Parts may be perform'd by Voices; by reason, Voices are conformable to one Pitch, yet, it will not dofor Instruments; — For Instance, Suppose your Key is E, with a sharp-Third, and your Mi is on D in the Bass, by Sharps; and also on D, in the Tenor or Upper-Part by Flats; Then is the Key-Note of your Tenor or Upper-Part, a Semitone lower, than the Key-Note of. your Bas; tho they both End on one Letter: By reason, E in the Tenor or Upper-Part, must be play' Flat, and E in the Bass is play'd natural. tural. - You'll find an Example for this, fet for a President, in a Tune of mine to Psalm'21, in my Universal Harmony; which will not do for Instruments, unless all Parts are Transposed one way, as I before hinted.

## Objections against fol-faing,

Scholar. I am told by many old Singers, and also by many Instrumental-Men, That you give me and all your Scholars else, a deal of unnecessary trouble, in obliging me to sol-sa every Note, according to the Transposition of the Mi; and they also tell me, That I need not call every short minute Note, in the Natural-Keys; but only call all Ty'd or stur'd-Notes, by the Name of the sirst Note; pray give me your Oppinion about that.

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Master. I know that all old Singers hate to hear others perform what they never could attain to; and Fidlers what they never learnt:

But let me assure such old vocal Practitioners, that they were bred up in the dark, and will ever remain so, so long as they harbour that conceited Opinion; For can any Tone move so smooth by a false Name, as with its Natural Name? No, this turns the Scale of Musick Topsy Turvey, and consounds the very First Rudiments: besides, when any Person thoroughly knows the Natural Order of the Scale, how easy is it to keep the regular Course of Notes according to it, altho' they stand on contrary Lines and Spaces; by which Method, every Person learns every Piece of Musick Note by Note, and by the very same Names as if they

Note, and by the very same Names as if they were always set in the Natural-Key. As to Instrumental-Men, I have often heard them say, their Lesson was F sharp, or B stat, &c. meaning that fuch Letters were flatted or fbarp'd at the Beginning of the five Lines; and that they always observ'd to play such Letters flat or sharp, &c. and that it was enough for them to Observe; and therefore, they thought any other Method useless, without having any Regard to either Key or 3'd; nor even so much Judgment as to know one Key from another. -Thus for want of a true Knowledge of Key's, folfaing, and Transposition, &c. Conceit leads them into Error; not regarding the First Rudiments of Musick viz. Sol-faing; which is The CHIEF REMINDER of the First Principles of Some

### Tones most to be Regarded.

Scholar. Sir, are there any Remarkable. Tones in the Scale of Musick, more to be regarded than others, whereby I may keep my Voice in the Air of the Key, when the sol-saing of which is made difficult by Transposition?

Master. Yes, there are some particular Notes; which being well regarded, ferve in a great Measure as a Guide to keep in Tune on all the: rest, viz. The PRINCIPAL TONES are the Ker-Note, and the Mi, which causes it to be either Flat or Sharp, &c. - Some there are who have only regard to the Mi; but as that comes but once in an Offave, I think it requires not so much Atrention as Fa, which comes twice in an Octave, which Tones must always be funk or Feinted, whenfoever you hit upon them, or else you immediately loose the Airof your Composition; for fa is to be regarded in your Flat-Third, to keep you in the Air of the Flat-Key: and in like Manner must you regard la of the Sharp-Third, which keeps you in the Air of the Sharp-Key also; for which reason, fuch Tones ought always to be kept in Mesmory.

> Firsh, have in Mind your proper-Key, And Mi, that doth all Notes else sown: And well regard your Sharp-Third's La, And not forget your Flat-Third's Fa. Mind well your Sixths, and (I presume,) You'll always keep both Air, and Tune.

#### CHAP. VII.

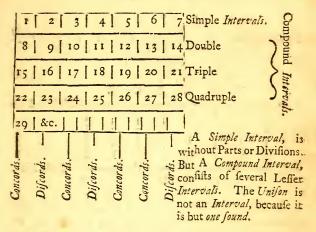
Of the several Intervals, Concords, and Discords: and how to compare one Part of Musick with another.

Scholar. W HAT Distances or Intervals, are called Concords, and what

are Discords; and why are they so called?

Master. Concords are such Intervals as are Tuneable and agreeable to each other; that is, when two (or more) different Tones sound together, so as to be Harmonious, and Delightful to the Ear, &c. such as the Unison, 3ds, 5ths, 6ths and their Ottaves, perfett, and imperfett. Discords, are such Intervals as are untuneable, jarring, and Disagreeable, such as a 2d, 4ths, 7ths, and their Ottaves, &c. both of which are either Simple or Compound.

# A TABLE of all the Intervals in Musick.



What Cord so'e'er you please to name, An Eight to that, is deem'd the same,

To compair several Parts of Musick together so as to know the Interval, whether Concord, or Discord; you must first take the Letter whereon any Note stands in any one Part, and compair it to the Letter of the Note against it in another Part; and count the Distance from one to the other, according to the Scale of Musick; by which you may know how many Degrees a Note in one Part, is different from any Note in another Part; and what Interval it is, whether Concord or Discord; and also what Number of Semitones each Interval contains; and whether

the Cord be Major, or Minor, or Perfect, or Imperfect, &c. often having recourse to the Table, on Page 73.

# Example of Two Parts compared together.



If you take the Letters of this Example and prick them down in Notes on the five Lines, in their proper Places, in Two Parts; you'll then fee how many Parts may be compared together.

When Parts together you compare, Confult how many Half-Tones are In ev'ry Cord: which will Express, To you the Greater, and the Less,

#### \*\*\*\*\*\*\*\*\*\*

#### CHAP VIII.

Of Theory in General: or, A Philosophical Demonstration of The Nature of Sound; and of the Racios and Proportion of Practical Intervals, &c.

S cholar. W H A T is Sound?

Master. Sound, is the Reverbation, or Modulation of Aur, being the Object of Musick.

Scholar, What is Air?

Master. Air is, that Fluid or Element, in which we move, breath and consist, composed of small Springy Particles, which give way to the least Impression made on them; which Particles move freely one among another; for which Reason, it is known to be a Fluid; and every Force that presseth upon Air, presseth at the same Time, in all manner of Directions:

—And as the Pressure increaseth, so does its Density; as is evident, of Air forced into a Bladder, for the more it is forced, the more dense it is; and as it decreases, it expands itself again, in all manner of Directions. — The force that presseth common Air, is the Weight of the Atmosphere

mosphere (that is, the Clouds, Rain, &c.) and the Spring of the Air is equal thereunto; by Reason they always Ballance each other, and produce equal Effects, &c. &c.

Scholar. You say that Air is the Object of Sound, pray tell me the Generative Part thereof?

Master. The Generative Part of Sound, isthat which produceth Sound, and bringeth it forth; and that is Motion, by Collession; or a Body's striking against the Air, which causeth Sound; and this Sound is more grave, or acute, according to the Force and Magnitude of the Body that strikes against it; this being that which constitutes different Tones, &c.

Scholar. What is the Support, and Continua-

Master. All Sound is supported and carried distant by the Medium or Air, which is called, The Sphere of Astivity, The Element of Sound; or The Element of Musick; and so far as the Medium passeth, so far passeth the Motion with it; and when the Motion ceaseth, then must the Sound cease also. — But if it meets with any Hinderance in the Way which it passeth, it strikes and shakes at every Obsticle it meets, making Ecchoes and Sounds according to the Nature of the Obsticle: But if it meets with no Hinderance as it passeth, then it passeth into the Sphere of the Air or Medium, according to the Force of the Sonorous-Body or Sounding-Body

Body; (which Body is the Center) moving in a certain Degree of Velocity or Quickness; and from this very Principle all Tones are deduced.

And as all Sounds move in a trembeling or vibrating Motion, the Difference of Tone appears to be no other than the Different Volocity or Quickness of the Vibrations of the Sounding-Body; it being proved, that the small Vibrations or Tremblings of any Cord or String, are all perform'd in equal Times; and that the Tone of the Sound (which continues for some Time after the Stroke is given) is the very same from first to last; whose Vibrations are supported by the Air or Medium.

From this very Principle, arises what we call Concords; which are nothing else but the frequent uniting of the Vibrations of two Sounding Bodies, and of the undulating Motions of the Air occasioned thereby; and that Discords are the result of the less frequent Unitings of the Vibrations, &c.

Scholar. How many Ways is Sound to be confidered?

Master. Sound, with regard to Musick is to be to considered two Ways, viz. Simple, and Compound.—A Simple Sound, is the Effect of a single Vibration, or of so many Vibrations as are necessary to excite in us the Idea of Sound; that is, the Product of one Voice, or of one Instrument,

frument, &c. — A Compound Sound, confifts of feveral Sounds proceeding from feveral diffinct Infruments or Voices, all uniting in the fame individual Time, and Measure of Duration; that is, all striking on the Ear together, be their Differences as they will.

And as the feveral Degrees of Tune are Proportional to the Number of the Vibrations, even so are the Vibrations equal or unequal, swift or more flow, according to the Nature and Constitution of the sonoreus Bodies: The Vibration or Tremblings of such Bodies being by which all Sounds do proceed, and arrive from a certain Pitch or Tension, either grave or acute; according to the Greatness, and Tension of the sounding Body.

From what has been said, it appears, that the whole Theory of Massick proceeds from the Vibrations, Oscillations or Fremblings of the Scorous-Bodies, and also the Proportion of Sound; for what Bodies or Sounds are more Acute, the more Swift are their Vibrations; and those more Grave, their Vibrations are more Slow, &c. Therefore the First Principal, by which the Nature of Harmonical Sounds was sound out, was by the Measure and Proportion of the Vibrations of the Sonorous-Body; each Note of Tune being made by a certain Measure of the Velocity of the Vibrations: I mean, That such a certain Measure of Courses and Recourses doth in such a certain Space of Time, constitute or appoint

fuch a certain determinate Tune; and that the Continuance of Sound, even unto the last, dependeth only on the Equality of the Time of its Vibrations; as may be observed by a Wire-String after it is struck; which was first observed by Pythagorus, &c. and this is what brings Harmony under Mathematical Proportions.—See The Dostrine of Pendulums, p. 41.

Scholar. Sir, I return you Thanks for your Diffinitions of Air and Sound, &c. but now defire you'll fay something concerning the Proportion of Sound.

Master In the last Chapter, I gave you a Table all Concords and Discords; and on p. 73, I show'd you what Number of Semitones each Interval included: But to find out their Proportions, you must first find out their Numbers, and then examine the Cause, why some are pleasant, and others unpleasant, of which the Ear is the umpire.

# Proportion of Concords, &c.

First take two Musical Strings, of an equal Length, and stretch them to an equal Tension or Tightness, and then strike them both toge her, and they will vibrate in equal Times, both Course and Recourse, in the Nature of a Pendulum till they rest: for when two Strings are in exact unifor to each other, one will vibrate to the other tho, untouch'd: Or if you lay a Straw

on one and strike the other, if it be in unison to it, it will vibrate and shake the Straw off, and also sound the Tone of the other String. — And because these two sound so perfect to each other, they are call'd Unison; the Racios of their vibrations being even both Course and Resourse, and called I to I, because each Motion, or Particle of Sound strike on the Ear both together.

#### UNISON.

	ı to ı.	1			
		l			

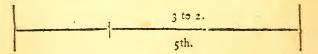
8th. The next Concord, is the Eight (being the next Racio or Proportion in whole Numbers, which is found by Doubling or taking but one half of the String, by dividing it into Iwo Parts, and Placeing a Bridge in the Middle: This will produce an Eighth to the whole String, whose Racio is called Dupla, or Double-Proportion to its Octave, by reason each Half of the String vibrates two Courses in the same Time as the whole String does one, it being Racio or Proportion as 2 to 1.

2 to 1.	2 to 1.	
8th.	8th.	

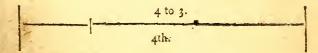
#### Proportions of Sounds. 111

All other *Proportions* are found by dividing the Octave into the other mean Rations that are included in it, &c.

Fifth. The next Concord is the Fifth, which is found by dividing the Chord into Three Parts, and placing a Bridge to take of one third; then will the two thirds of the Chord produce a Fifth to the Whole; and vibrate Three Courses, to Two in Dupla-Proportion, and unite every third Course; which Racio is called Sesquialteria-Proportion, or 3 to 2.



Fourth. The next Cord is the Fourth, being found by dividing the Line into Four equal Parts; and by stoping off one fourth with a Bridge: Then will the three fourths of the Line, produce a Fourth to the whole Line; and unite every fourth Course of its Vibration. This is called Quadruple-Proportion, whose Racio is 4 to 3; by reason it vibrates four Courses, in the Time of Three in Sesquialteria.



Third'y. Then take another uniting String, and divide that Part as was stopt off to make the Fifth,

Fifth, in two equal Parts, and it will give the Greater-Third to the open Spring, and its Motions will unite every fifth Course: Its Racio is 5 to 4, by reason it vibrates five Courses in the tame Time as Four in the Racio before it.—By this you may easily conceive the Lesser or minor Third, whose Racio is 6 to 5, its Courses uniting every fixth Course of its vibrations; i. e. Six Courses in the Time of Five of the Greater Third's Motions.

N. B. That all Racios that are within the Number Six, are Concords, &c.

Sixth. The Mijor Sixth is within the Number of Concording Racios, and in Racio 5 to 3; and vibrates five Courses in the Time of three, meeting every 5th Course of its vibrations.—And altho' the minor Sixth is not within the Number Six, yet it is a far better Cord, by reason, when joyned with the Ostave, and Fourth from the Unison, it hath the lesser Third to one, and the greater Third to the other; their Motions uniting accordingly, whose Racio is 8 to 5, and the Complement of 6 to 5, to the Ostave or Eighth, &c.

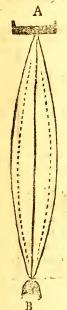
ATABLE of all the Intervals contained in the System of Diapason or Octave; with the Number of Semitones in each Interval; and their Racios; being The whole System of Harmony.

			Racios.		Ī
	Semi-	Intervals Names.			ı
	tones.				l
	-12	A Diapason, Octave, or Eighth -	2 to	1	
-	11	S A Semidiapason, SeptMajor, or	15 to	8	
-	-10	A Greater Seventh—— S A Sept-Minor, or Lesser Seventh—	9 to	5	ı
1	9	A Hexacbord-Major, or Greater Sixth	5 to	3	١
1	8	A Hexachord-Minor, or Leffer Sixth	8 to	5	I
	-7	A Diapente, or Perfect Fifth-	3 to	2	l
	6	S A Semidiapente, or Minor Fifth?	45 to	32	I
ı		A Tritone, or Greater Fourth—5			
Ì	5	A Diatessaron, or Perfect Fourth -	4 to	3	
	-4	A Ditone, or Major Third -	5 to	4	
ı	-3	A Semiditone, or Minor Third -	6 to	5	ı
	-2	A Tone, or Major Second -	9 to	8	
١	I	A Semitone, or Minor Second	IO to	9	
		A Unison, or One Sound	I to	1	
				1	1

#### (See the N. B. on Page 62.)

Hence it is, that the Vibrations of a Chord or Musical-String truely represents the Motions of a Pendulum, as I before hinted. Now, if you take a Wire, or Musical-String, and fix one End on a Center, and hang a Weight at the other End to hang as a Pendulum, and when it hangeth still, gently strike the String with a bit of Wire, so as not to move the Weight, the String

will Treml le or Vibrate in equal Spaces of Time, in the very Nature of a Double-Pendulum so long as it Sounds; extending itself widest in the Middle; according to the Figure: A B



Here you have both a Musical-String and a Pendulum, all in one; whose Vibrations constitute both Time, and Proportion of Sound: And this to the very PRIN-CIPAL, and Reason that Musick comes under Mothematical Proportions, both in Time and Tune, &c .- Thus by a larger Weight you may make your Tone more acute, which will make the Vibrations more swift accordingly; and fo on to what Tenson you please.

Thus have I laid down all the most uteful and Natural Grounds, Racios, and Proportions of Harmony, which proceeds only from the Vibrations of the Courses, and

Motions of the Sonorious-Bodies; which Motions determine both Time and Tune; and also render each Sound more or less Pleasant, according to the frequent uniting of their Courfes as they fall on the Ear together; from which we diffinguish both Concord, and Discord, Concord being nothing but the frequent Motions falling on the Ear, at the same Time, and Discord is when they seldom or never meet whole whose Racios are innumerable, by reason of their cross Motions, &cc.

As to other Matters that are partly useless in Fractical Musick, I shall herein omit; leaving that to the Criticks and Hair-Splitters of our Age to determine; and so conclude this Chapter.

Thus, by Division of a Line, We Measure Sound, as well as Time: Whose trembling Motions we do sum, Like as those of the Pendulum.

For by Experience it is found, That Motion is the Source of Sound; Not without Air: — (it doth appear) For Air conveys it to the Ear.

Air, like a circling Wave l'th' Ocean Expands itself at every Motion; But when that Force is spent, Air then Returns itself to rest again.

Concord is form'd, it doth appear, When various Sounds meet on the Ear; But when they in cross Motions more, Your Sound does then Discordant preve.

Now what is useful I've exprest: — Let Study then compleat the rest.

#### CHAP. IX.

Of Practical-Musick in General: containing the RULES of Composition, according to the most Authentick Authors, &c.

1. The Allowed Passages of Concords, &c.

#### RULEI.

HEN the Notes of one Part standeth still on one Sound, and the Notes of another Part moves to various Sounds; the Noving-Part may move to a y Sound that maketh Concord to the Standing-Part. Thus:

N. B. That whensoever any fingle Cord is named, its Eighths or Offaves are also meant.

#### RULE. II.

When the Notes of Two, or more Parts fland you may take as many Concords of one Sorts, as you please. Thus:

#### RULE. III.

You may not take Two Fifths, nor Two Eightles together, neither Rifing nor Falling, unless one be the Minor, and the other the Major Fifth, as Thus:

#### RULE IV.

You may take Two or more Major Sixths, or Sixths of (different Kinds together either ring or falling, either by Degrees, or Leaps Thus;

RULE,



· Itold



I told you in RULE III, that Fifths and Eighths, &c. were not to be taken together, neither Rifing nor Falling; which may not be done by any means in Two Parts, by Reason they will cloy the Ear: But two Fifths, or two Eighths (and no more) may be taken together in Three, or more Parts (when it cannot be well avoided) rather than spoil the Air; but then such Fifths, or Eighths must be covered by an higher Part, and the Piece must be never performed in sewer Parts, but to have them covered.—The like is to be understood of Fourths, by reason, in Canon of Deuble-Descant, they will in the Reply, become Fifths.

#### RULE. V.

You may use as many Thirds as you please, either Rising, or Falling; by Degrees, or by Leaps, if one Third be Minor, and another the Major: But two Major Thirds together are not good nor allowable, unless it be just before a Close; or in such Places where it cannot be well avoided.

#### RULE. VI.

When two Parts move Gradually by Contrary-M tions, (that is, one Part Ascending, and the other Descending) the Notes in one Part may be so broken or divided, whilst the other Part Stands, so as to Sound no Discord, &c. as the Composer alone pleases.

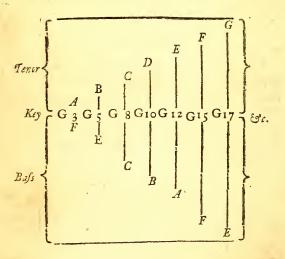
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By this RULE, you may pass, by Contrary-Motions, from any one Concord to another, either by Degrees, or by Leaps; I mean, when the Upper-Part-Rises, and the Lower-Part-Falls; — Or, when the Lower-Part Rises, and the Upper-Part-Falls.

Suppose, your Key is G, and your Upper-Part-Rises, and the Bass-Falls, &c. Then you may move each Part accordingly to this

Scale, by Way of Letters.

# Allowed Contrary-Motions.



By this Scale you see the various Movements of Centrary-Motions, from any Concord what-soever:

This

This RULE being meant backwards, as well as forwards; and to move from any Concord else, as well as from the Unison, &c.

### § 2. The Use of all Concords.

The Unison, is so Consonant, and Perfett a Sound, that if ever so many Sound together, the Ear cannot Distinguish them to be but as one and the same Sound; only the Sound is more Strong.—It may be used at the Beginning of Strains, and also at the Conclusion; and as oft in the Middle of a Composition as the Composer alone thinketh sit.

The Third, is a Concord that yieldeth great Variety to the Ear, and is properly called, an Impersect Concord.—— It may be used in any Part of a Composition, to render Persect Cords more Sweet, when they follow it, &c.

The Fifth, is a very sweet, pleasant, and Perfect Concord: Two of which are Not allowed to be taken together, neither Rising nor Falling, (unless cover'd by another Part) by reason they cloy the Ear.—It may be used in any Part, or Place of a Composition, and mostly to follow other disagreeable Intervals, that are not so much affecting.

The Sixth, is an Imperfect Concord, and is more like a Discord, in Quality, than any other Concord whatfoever; and is Compounded of a Third and Fourth; for which Reason, it ought to be carefully used. - Sixes of different Kinds may be taken together, either Rifing or Falling, either by Degrees or by Leaps; or be mixed with other Perfect Concords in any Part of a Piece of Musick; but never to Begin, nor yet to End with. - In Four Parts, the Sixth may take the Place of the Fifth, on all sharp'd Notes; or otherwise when the Fifth is omited. The Sixth is of fingular Use to render other following Perfett Cords more sweet and melting; and may be properly called a Middle Concord, &c.

# Of the Eighth, or Diapason.

The Eighth, is the First and Principal of all Concords; not only because its Sound is Persett and Pleasing, but that it is The Whole System of Harmony, and containeth all other Lesser Intervals; and that all other Intervals agree with it, if they do not agree with each other; and being udded to itself, it still produces Concords.——It may be used in any Part of a Piece of Musick, either to begin with, or essewhere in the Middle, being mixed with Impersets, &c. but no Cord so proper to conclude with: and may properly be called, The Period of Harmony.

#### RULE. VII.

You may pass from an Eight to a Fifth, or from a Fifth to an Eighth, when the Upper-Part either Rises or Falls but one Degree (and not otherwise.) Thus:

Example allowed.

Thus have I shewed all the Allowed Passages of all Concords included in the Diapason; so that what ever Double, or Triple Concords are above, or below it, are only a Repetition of the single Cords over again; by Reason, every Eighth or Octave is counted the very same, &c.

§ 3. Of Passages Not allowed.

You may not Pass from a 1 to a 3d 3d to a 1 3d to a 5th 5th to a 3d 5th to a 8th 8th to a 5th 6th to a 5th

If the Upper, and Under-Parts both Rife, or Fall by Leaps.

You may not Pass 6th to a 8th or Falls by Leaps, and the from a 8th to a 6th Under-Part Rijes, or Falls the same way by Degrees.

Nor from an 8th to an 8th—by Degrees, nor by Leaps.

E 4

\$ 4. UI

### § 4. Of Consecution, by Transition.

A Confecution, is when Gords of the same kind follow one another; — which are generated by Transition. i. e. by moving by Degrees from one Note to the other, to molific the Harshness of a Leap; for every Dissallowance doth end either in the Fifth, or in the Eighth; according to the following Example.——

By this Example you see that Transition, or breaking of Notes begets a Consecution of Perfects of one Kind, by both Parts moving one way.

Hence it is, that if the Upper-Part moves but by one Degree, and the Bass by Leaps, that no Dissallowance can happen; (only as the Passage from the 6th to the 8th) unless it be

set on Purpose, &c.

From this, it appears, That Degrees are the properest Movements for the Upper Parts, and Leaps for the Bass: But if you make a Disorder in your Movements, then will that Disorder soon generate a Consecution: But that which is Natural, cannot be displeasing, and this, I think is sufficient to shew what we call Inharmonical, and how such Passages may be avoided.

### 9 5. Of Taking Discords.

When Discords are concern'd as well as Concords, then is the Descant called Figurate. Discords are admitted into Composition two Ways, viz. by way of Pass, and by way of Binding; according to this Example.

Example

# Example of Transition.







By this Example, you fee how Difcords are taken by Pass, i. e. when Parts make a gradual Transition from one Concord to another; which may be allowed in any Transition whatsoever, if the first Note be a Concord, and the last does not produce a Consecution of Persetts, &c. which Example may be considered backwards, as well as

forwards, &c.

To take Discords by way of Binding, is when Discords are on purpose placed between the Concords; in order to render the following Concords more graceful. And as the Ear is the Umpire of all Sounds, it can best give Directions where to place them, and by observing other Compositions, &c. For as Vinegar, Salt, Pepper, &c. give a Relist to Meat, even so do Discords unto Concords, and render the Concords more sweet and Delightful: which, when artfully taken and applied, produce the best Musick.

In former Days, the 4th was call'd a Concord, but now it is reckon'd a Discord; but I rather think it ought to be termed Imperfect, especially if it be the Major 4th; by reason, it has the same Number of Semitones as the Minor 5th; no Cord having a more graceful Charm, when regularly placed.—The 2d and 7th, &c. are very Inharmonical, and are best tolerated in many Places.

when covered by an higher Part.

§ 6. Of Descant, and Compesition.

The Original of Composition, is called, Counterpoint, or Plain-Descant, which is, when Concords are only employed, Note against Note.—Figurate-Descant, is when Discords are admitted,

E-5

and

and wed as well as Concords, either by Transition or Pass, or by way of Binding; which is the Ornamental Part of Musick,

Whenfoever you begin a Composition, First, consult your Suljest, whether it be Grave or Ckeerful, and adapt your Notes accordingly to express it; and not be like some Ptalmodists, who set cheerful Junes to grave Words, for that is quiet contrary to Nature.

If your Words feem Heavenly, let your Notes Assend; and if Earthly, Descend, &c. as much as your Rules will admit; making no particular Parse or Rest, till your Words come to a Period: But a Sob, Sigh, as Hark! Ob! &c. may be express'd by a short Rest; and Measure your Time according to the Sense of your Words, and Length of your Syllables, &c.

### 97. Composition of Two Parts.

First, consult your Key, and make your Leading Part as much agreeable to the Subject as possible; and then set your Bass to it according to the Rules before-mentioned; both moving as smooth as possible, in the Bounds of a Voice, or Instrument; according to the following Example.

#### 9 8. Of Closes

Whensoever you make a Close, your Bass must either Rise a 4th or Fall a 5th: (or you may Close to make an Eighth by falling your Bass-Note but one Degree.) See the following Examples.

Example





# 99. Composition of Three Parts.

If you would fet a Second Treble, or Cantus, Medius, or Counter, to any Piece of Musick, that was before in Two Parts, to make Three Parts; let it begin from the Bass on some different Cord from the Tenor, and so on to other Cords, on every Note (if possible) through the whole Composition, avoiding Distallewances between your Upper-Parts, as well as between them and your Bass; observing to keep your Inner-Part in as true bounds as you can, that it may not be too bigh and strong, so as to spoil the Air of your Tenor or Leasing-Part.

Two Fifths, or two Eighths (and not more) may be taken together in Three Parts, it they be between the Middle Part and the Bass, and be covered by an higher Part, rather than spoil the Air of the Composition; but take care, that you do not make a Consecution of Perfects from the Bass unless covered; which often will happen, and your Eye cannot soon discern it, when your Tenor makes a Fifth, or an Eighth (it being then the highest Part) and the other Part immeditely supplies the Office of an higher Part, and so makes a Consecution of the same kind.—

Suppose the Tenor and Bass be D D, an 8th, and your Tenor falls, and your Bass rises to E, and your Medius rises to E, to be the higher Part, then is there a Consecution of 8ths; i. e. D D, the Tenor and Bass, and E E, the Medius and Bass; an Error that I have formerly ran into, (the not seen by a thousand tolerable Judges,) nor is it so readily to be seen in the Score, as it is heard.

As for other Inha monical Difallowances, they are caffor tolerated in Three Parts, than in Two, when covered by the highest Part. An Example of Three Parts you have as follows.

# 10. Composition of Four Parts.

To make a Four Part Composition, your three Upper-Parts must, each of them, take a Different Cerd from the Ground or Bass; that is, if one Part be a Unison or Eighth, the other two Parts must be a Third, and Fifth; and so on: observing always, that each Part has a different Cord from the Bass; unless where it cannot be well avoided, rather than spoil the Air.

### Example of Thre Parts.



# Example of Four Parts.





N. B. That accidental Sharps are more used in Flat-Keys, than in Sharp-Keys, in order to make the Thirds, Sixths, &c. the Greater Thirds and Sixes; to render the Harmony more cheerful and sprightly.

Observe, That neither Fifths nor Eighths are not to be taken together in Four Parts, (especially between the Tenor and Bass) unless it be from the Counter-Tenor, and then they must be covered by an kigher Part.

As for Difallowances, Discords, and the like, they are easier tolerated in Four Parts, than in Three, or in Two Parts; by reason, the more Parts there are, the Lesser will a small Disallowance be heard.

And although a Composition consists of never fo many Parts, there can be but three several Concords joyned at once from the Ground or Bass Note; that is, the Unison or Eighth, the Third, and the Fifth, or Sixth; by reason the Sixth takes the Place of the Fifth, when the Fifth is lest out; unless it be at a Close where a Discord is placed, between the Inner-Parts, and the Fifth and Sixth taken together, and the Eighth entirely lest out; which is a very curious Close.

Observe, That in a sharp Key, an Eighth is seldom made on the sharp Note next under the Key; nor yet on the sharp Note, a 3d above the Key, nor on any accidental sharp'd-Notes in the

Bass;

Bass; by reason, they are disagreeable to the Ear; but a Sixth generally is used in the Eighth's Place on all sharp'd Notes; and, in Four Parts, the Minor Fifth, and the Sixth, go together in such Places, &c.

# § 11. Composition of 5,6, and 7 Parts-

To make a Five Part Composition, you must add another Ostave to some one of the Concords, of the Four Parts; by reason one of the Concords must be doubled.

If you would have Six Parts, then must you add another Octave to another of the Concords; and then will Two of your Concords be doubled; and you will have a Composition of Six Musical Parts.

To compose Seven Parts, all your Three Concords must be doubled: But that Concord must not be doubled that makes a Binding Cadence, or stands single; therefore it must of necessity be Trebled, &c. — And altho' the Parts do often meet in Unison (as can't be well avoided) yet they must remain so as short a Time as possible.—And the surest way to avoid Consecutions, is to place the Notes of one Part, above, or below the Notes of another Part, to move various Ways, i. e. that is one Part upwards, and the other downwards, &c.

### § 12. Composition of Eight Parts.

Choral-Mulick, consists of Eight Parts, sung Alternately, or by Turns, by Two opposite Quiers;

Quires; or by Two Sets of Instruments.—This Composition consists of Two Bases, and Three Upper-Parts builded on each Bass. First one Quire performs one of the Four Parts, and then the other Quire answers again with the other Four; and Lastly, both Quires Repeat all the Eighth Parts together in Full Chorus; at which time the Upper Bass, supplies the Office of an Upper-Part; and the Seven Upper-Parts are then founded on One entire Bass.

And as this must be so artfully composed, as each Bass must be a true Bass to its own Three Upper-Parts; so must the Lower-Bass be a true Bass to all the Seven Upper-Parts, when all perform together in Full Cherus.

As to the Agreement of the Two Bases between themselves, they must be as Unison, Eighth, Sixth, or Third; never above one Fifth, because the Upper-Bass will be a Fourth to that Upper-Part, as is an Eighth to the Lower-Bass; for the Musick of one Quire must not depend on the Bass of another; tho' all make one entire Harmony, when all joyn tegether.

Mark well, That in such Places where the Bases are Thirds to each other, if you throw off the Lower-Bass, the Eighth's that were in the Upper-Parts to the Lower-Bass, will become Sixes; And where the Bases are Sixths to each other, and you take away the Lower-Bass, those Upter-Parts that were Sixes to the Lower-Bass,

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will become Eighths to the Higher; and where the Bases are Unison, or Eighths to each other, the Cords of the Upper-Parts, will be the same Distance to each other.—And the Thirds are allowable between the Two Bases, yet if they move successfully, the whizzing of the Lower-Notes will offend the Ear, &c.

Of this curious Sort of Composition, I made a Piece to a Gloria Patri, some time ago, as desired by a Gentleman of Exeter, in Devonshire; where it is compleatly perform'd; which I design to print very shortly, for the Use of my Scholars.—Hence it appears, That

If you Errest a thousand Parts, or more, They in Effest, are but the same as Four.

### CHAP. X.

Of Canon in General, and how to compose any of them.

O compose a Canon, you must first prick down your Fuge (or such a Quantity of Notes, as you would have to lead your Point) in one Part; and then carry the same Notes forwards, and prick them down in another Part, either in the Unison, 3d, 4th, 5th, or 8th, &c. above, or below the Leading-Part.

Example

Of Canon. (137)
Example of Fuge.





Then fill up your vacant Bars with fuch Notes as conform to the LAWS of Harmony.

By this First Example, you see how a Fuge is formed; this being in the 8th, below, and called a single-Fuge: and by this Method, you may compose any Canon whatsoever, and of any Degree above or below the Leading-Part; either in Two, Three, or Four-Parts, &c.

The fecond Example, shews how the Whole stands in Score; and the Third Example directs how to prick it down in one Part; this Mark: S: Directing at what Notes the following Parts are to fall in at.

A Canon is a perpetual Fuge, i. e. Parts always flying one before another; the following Parts repeating the very fame Notes (either in Unison, or higher or lower) as the Leading-Part: and because it is carried on by so strict a Rule, it is called Canon; which is the superlative, or higest Degree of Musical Composition.

being Part of the Titles of Canons; signifies that they are composed of One, Two, or more Fuges; as the Title directs, &c.

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# § 2. Denominations of Fuges, or Canons.

A fingle-Fuge, or Immitation, is when Parts immitate one another, as the former Example.

A Double-Fuge, is when two feveral Points, or Fuges fall in, one after another.

A Canon Arsis & Thesis; or Arsin & Thesin, is when a Point Rises in one Part, and falls the same Notes again in another.

A Canon Per Augmentation, is when the Notes of the Following-Part, are as long again as the Notes of the Leading-Part.

A Canon Diminuiton, is when the Notes of the Following-Parts, are as short again as the Notes of the Leading-Part.

A Canon in Unison, is when both Parts begin on one Sound, and one Part moves on all the Concords of the Key, 'till they meet again in Unison; sometimes one Part holding the Tone, and then another, like a Canon composed on a Ground, &c.

A Canon-Reund, or Round-Catch, is composed; as 2, 3, 4, or more Parts in Score, and then prick'd down in one Cliff, as one entire Tune and sung Round.—The first leads the First Strain,

Strain, till the Mark directs the Following-Parts to fall in, &c. and so they go round as often as they please.

A Canon Rette & Retro, is composed as two Parts in Score; and the latter End of the Bass is set next after the last Note of the Upper-Part, and prick'd backwards; so the first Part is performed Forwards, and the latter Part Backwards, &c.

A Canon Double-Descant, is so composed that the Replication or Auswer of the Upper-Part; becomes the Pas; and the Bass the Upper-Part; in which 5 ths are to be avoided, because, in Reply, they will become 4ths, &c. &c. &c.

Thus, I ve the RULES of Composition frown, And Cords Allow'd, are clearly here made known: Discords I ve mention'd, and what else we call Cords Not Allow'd; and Inharmonical Which RULES observ'd, show we Frame each Part, Whereby we Judge of this our sacred ART.

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CHAP.

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### CHAP. X:

#### THE

## Musical Alphabet:

Explaining all the Technical Terms used in Mufick; as they are derived from the Greek, Latin, French, Italian, &c.

#### Α.

An Abrevation of Alamire.

A. A Bene Placito. Signifies, If you please. Accent. A warbling Tone. Accord. Agreement
Accute. Shrilness of Tone Adagio. The flowest Movement in Time Ad Libitum. If you please Ad Due. or Doi. Two Parts. Affetto, Affettusse. Tender and Affectionate Allegretto. Pretty quick Allegro. The Time quick and lively Allegro Allegro. More quick than Allegro Allegro ma non Prasto. Not too quick Alto Ripieno. Tenor of the Grand Chorus Allelujah. Praise the LORD Alternate. Performed by Turns Alto. The Counter-Tenor Alto Concertante. Tenor of the little Chorus-

Altus Counter Tenor
Andante. Go, or move distinctly.
Anima, or Animato. Brisk and lively.
Anthem. A Divine Song in Prose
Aria A short Air, Song, Tune, &c.
Ariosa. The Movement of any Musick
Ariss. Rising in one Part
and and
Thesis. Falling in another
Assa. Not too quick, nor too slow
Assa. Try, or prove your Voice, or Instrument.
Atempo giusto. Perform the Time just and equal

#### В.

B. Signifies, Bass, or Basso Bar. A Stroke that divides the Time Bass. The lowest and fundamental Part Counter-Bass, The Second or Double-Bass Thorough Bass. The continual, or figur'd Bals Basista. One who sings or plays the Bass Ballo. The Vocal-Bass Baso-Concertante. Bass of the little Chorus Basso-Continuo. Continual, or Thorow-Bass Basso-Recitante. Bass moving continually Baso-Ripieno. Bass of the Grand Chorus. Battuta. Motion of the Hand in beating Time Binary. A Measure of Time, equal down and up Bmi. An Abreviation of Bfabemi Bmollare, or Molle. Soft and Flat Breve. A Note, the Length of two Semibreves Brillante. Brisk, Gay, and Lively. Bung.

Buono. Good Burden, The Repeated Part at each Verse end

C.

Cadence. The closing Note Camera. Chamber-Musick Canon. A continual Fuge Cantara. Musick for both Voices and Instru-

Canto. The Treble, or highest Part

C. An Abreviation of C-fol-faut

Contofermo. The only subject Part Cantus. The Treble, or highest Part Canzone. A Song

Capella. Chapel-Musick Capo. The Head Instructor.

Capricio. To perform carelessly

Castanets. Wooden Hand-Instruments

Catch. A Canon Sung round

Cattivo. Bad.

Chacone. A Sort of Dance

Chant. To Sing. The old Church-Musick Chanter. A Singer, &c. Characters, The Marks used in Musick Chiave. The Fundamental Key or Tone, &c. or Musick design'd for Churches.

Chiudendo. The finishing Strain, &c.

Chords. Musical Strings, &c.
Choro, or Chorus. The full repeated Parts, &c. Chroma, A flourishing Way of Singing, &c.

Chromatic. Sounds moving by Semitones Ciacona. A Tune set to a Ground-Bas

Clavis. A Cliff Close. A Conclusion of Parts Come Sopra. As above, or over again C.mma. A supposed 9th Part of a Tone Commen-Time. Down and up equal Compieta. A Church Pfalm or Hymn Composita. A Composer of Songs, Harmony, &c. To Compose. To compose Musical Sounds together Composition. Many Parts Musically framed together Compounded, or doubled Con. Sgnifies, with Concert, A Piece of Musick in Parts Confort. \$ Concertante, A Part moving continually Concerto, Converto-groffi. The Grand Chorus Concinnous. Intervals, a little Disagrecable Concords. Agreeable Intervals Conjoint. Degrees lying next one another Consequent. Imitating Fuges Confonant Sounds agreeable. Conspirato. with Life and Spirit
Continuato. with equal Strength, and equal Time Continuoto, The continual, or Thorow-Bass. Contra, The Counter-Tenor Contralto. 5 Counterpoint. Notes, Bar against Bar

Contra-Tenor. Between Ireble and Ienor

Cords. Tenes or Sounds

Crotchet.

Crotchet. A Note, Half a Minim
Cymbal. A Wire and Gut Instrument: and some
are made of solid Pieces of Brass, struck
with an Iron Rod, &c.

Cythra. A string'd Triangular Instrument

#### D.

D. An Abrevation of D-solve, &c. Da Capo. End with the first Strain Degree. From one Note to the next Demi. The Half Demiquaver. A Note with a triple Tail Depressio. The Fall of the Hand Descant. To run a Division of Notes Plain-Descant. The orderly placing of Concords Figurate-Descant. When Discords are used Double-Deseant. The upper Part made the under Diagram. The Scale of Musick Diapason. A persect Eight. Diapente. A perfect Fifth Diatesfaron. A Fourth Diatonick-Scale. The Modern Gamut Diesis: A supposed lesser Semitone Diminuition. Diminished Discords. Disagreeable Intervals Dissonant. Discordant Ditone. A greater Third Division. A Running of Notes Divoto. In a serious devout Manner Doi. Two Dolce. Soft, sweet, and agreeable Drum. A Military Instrument Duo.

Duo. Two Parts Dupla. Double Dux. The First that leads a Fuge

E. An Abreviation of Elami Ear. The Umpire of Sound Eccho. Soft, like an Eccho Ecchus. And so if repeated
Ed, or E. Signifies, and,
Enharmonick. A supposed Movement by
Quarter-Notes

Exampli Gratia, or Ex. Gr. as for Example

F.

F. An Abreviation of Forte, and of Ffaut Fa. A Flat Note, or a Feint Faburden. The Church Tune, or leading Part F. F. Forte, Forte. Very strong and loud Feint. A Semitone, or fa Fifth. A perfect Concord Figurat. Flourishing Fin, or Finale. The last Note of a Tune Flaut. The Key-Note of the Bass Flat. A Character, so called Forte, Fortement, Very Strong and Sound Fortessimo. As strong and loud-as possible Fourth. A Discordant Interval Fret. Places where strings are Stopt

Figa, } Parts flying one before another, &c. Fundamental. The Principal Tones

G. The

G

G. The Cliff-Note of the Treble or Tenge Gamut. The Scale or Table of Musick Grandee. The Grand Chorus Gratioso, Agreeable and Graceful Grave, Very slow and grave Gravemennt. As grave as possible Gravity. Deep and low Guida. The leading Voice or Instrument

H. Habitude. The Relation that Sounds bear one to another Hand. The old Scale, or Table of Musick Harmony. Agreements of Sounds Harp. A String'd Instrument Harpeggio. Sounds to be heard very distinctly Haut-Contre. The Counter-Tenor Hemiopus, An ancient Wind Instrument Hemitone. A Semi, or Half Tone Hexachord. A Concord, call'd a Sixth High. Shrill, loud, acute, &c. Homophonous. Sound in Unifon, or one Sound Hymn. A Divine Song in Verice Hypo, Infra. Bellow Hypoproflambanomenos. The lowest Degree of Sound.

I.

Jar. When Sounds disagree-Imitation: When Parts imi ate one another Index. A Director.

4. Inkarmonical.

Inharmonical. A disonant Sound unexpected Ino. An Hymn, or Spiritual Song Interval. The distance between two or more Sounds Ionick. A Mood, Soft Airy, and Melting

#### K

Key. The Fundamental Note or Tone, &c. Key- Note. The last Note of the Bass Keys. The Toutches of Organs, Harpsichords, &c.

#### L.

La. An Abreviation of Alamire
Lamentatone. Lamenting and flow
Languente. Soft and languishing
Largetto. A little flower than Largo
Largo. A middle Movement of Time
Legato. When Notes are tied together
Legerment. Lightly, Gently, and careful
Lente, Lentus, Very flow and fost
Lentemente.

Libero. Notes untied, and at liberty
Long. An old Note, of four Semibreves
Lydian. A Mood, very doleful and flow
Id eft. i. c. That is

#### M.

Madrigals. Short Verses set to Musick
Maestoso,
Maestusso. {With Strength and Grandeur
Major. The Greater

Manicherd.

Manickord, A one String'd Instrument Mister-Note. The Key-Note, and Mi-Note Mean. Counter-Tenor Masure. The Motion of the Hand or Foot, &c. Medius. The Counter or Middle Part Melos. A Piece of Melody

Men. Not so much

Mi. The Note B-fa bemi Minim. Half a Semibreve

Minor. The Lesser.

Minuet. A quick Dance
Mood. The Movement, &c.
Modulation. The expressing of Sounds, &c.
Molle. Flat or Feint.

Monstra. A Director Motetto. A Church Composition in various Parts

Motion. Time quick or flow
Musick. The whole Doctrine of Sounds, well

disposed, &c.

Musico Theorico. A Person who Studies the Science of Musick in private, and writes Treatiles and Comments thereon; endeavouring to explain in the dark Passages of the Antients, as well as to give Instructions by Practice.

Mutation. The feveral Changes of Tones, &c.

#### N.

Natural. Notes not transposed or so mark'd Necessario. Necessary, or that must be done Non. Not

F 5 Nonpula.

Nonupla. Quick Jigg Time Notes. Characters so called, long and shore Nota-Beni. Mark well, or Note well

#### 0.

Obligatio. Signifies, for, or on Purpose for Octave. An Eighth Octavina. A small Spinnet Ode. A Song, Sung to an Instrument Omnes. All together Ondeggiare, The slow return of the Hand, doubling the Motion Opera. Song for both Voices and Instruments Organ. The most Harmonious Wind Instrument Organo, The Thorough-Bass Overture. Play'd before a Play or Concert begins

#### P.

Piano, or P. Soft, like an Ecchoe.

Per. By

P. P. More fost than Piano
P. P. P. Pianissimo. As fost as possible, but just heard
Para. Near, or next of all
Part. A particular Portion, in its proper Cliff Passepied. A very brisk Air, &c. very lively Passionato. Passionately, tender, and effecting Pastoral. A soft Air, sung like Shepherds, &c. Pathetica. Pathetically, moving, and effecting Pavin. A grave Spanish Dance
Pause. A Rest, or to keep Silence
Pedals Feet-Organs

Phrygian-mood:

Phrygian-mood. War like Musick

Pieno. Full

Pietojo. Soft and pitiful, and compassionate Pique. Each Note to be heard distinctly

Piu. A little more.

Poco. A little less

Point. Any Number of Notes, or a Mark fo called

Prelude. An Interlude, &c.

Pressa. A Repeat, or a Mark where a Canon begins

Presto. Quick
Presto, Presto. Very quick.

Primo, or 10. The First.

Prolation Shaking the Voice

Pronto. Quick, without loss of Time Proportion. The relation of Sounds, Time, &c.

Profalmbanomenos. A loud Sound added

Pfalm. A Divine Song. &c.

Dfalmody. The Art of finging Pfalms, or the Place Pfalmodist. A Teacher, or Singer of Psalms, &c.

Quardo. B made natural by that Character Quadruple. Four Foil Quarto, Four Parts Quaver. A Note, being half a Crotcket Quavering. Shaking Suinta A Fifth

R.

Re. The ancient Vocal Name for G or sol Recitativo.

To fing in a Tone like chant-Recitativo. ling, &c. pronouncing the grave

Recit, or Reo. Parts, &c.

Register The Stop of an Organ, or Pitch-Pipe Reherfal. The repeating, or learning of Mufick Repeat. :S: This Character is so called Repetition. A Repeating the same again

Repetatur. Replica. Let it be repeated. Replicato.

Represa.

Resonance. A Resounding or Sounding again Responsary-Song. A Composition, sung by Turns Rest. To keep Silence, A Character so called Ribattuta. To give one Note many strikings Ricercata. An Air play'd Extempore

Riditta. 3. A Part repeated at the End, &c.

Riga-Line. The Lines whereon Notes are fixed Rigadoon. A gay pleasant Dance

Ripiano, or Ripieno. Signifies, Full

Risvigliato. A lively Strain following a dull one Ritornello. The End of a Tune repeated, &c. Rondeau. A Tune ending with the first Strain Round. A Cannon Sing round, or Round-Catch Roundeley. A Strain the End of every Verse

Solo, or S. Signifies alone, or Parts fo moving are called, Solos,

Sackbut. A Trumpet Instrument, play'd by drawing a Register

Salve. An Anthem

Semilreve!

Sarabrand: A Dance like a Minuet Scale, A Rule or Table, &c. Sciolto. Notes untied; and at Liberty Score, Parts one under another, Bar against Bar Second. No Note between, or the 60th Part of

a Minuet Secund. The Second

Semi. The Half

Semibreve. A Note containing two Minims Senitonick. A Scale moving by Semitones

Senza. Without

Seranade. Musick play'd in the Streets, &c. Seventh. A Discording Interval

Sharp. A raising Character, or more Shrill

Sicilian. A flow Sord of Dance

Simple. Single

Simplionia. Notes agreeable to the Composition

Symphony. The Musical Action of the Voice.

Si Piace. If you please

Sixth. A concording Interval

Smorzato. Bear a light Bow, and play foft

Soave, or Soweet and agreeable

Sogetto. The main Subject, as Canto fermo Sol. A Contraction of Gamut Golreut, and Dlasol

Solfaing. To call Notes by their contracted Names

Sollecito. Afflicted, mournfully, &c.

Solo. Alone, or for one Voice, or one Instrument Sonata, or A Composition only for Instruments

Sonnet.

Sonnet. Curious Songs fet to Musick
Sono. Signifies Sound,
Sopra. Above, or upper

Soprano. The upper Instruments, as Trelle,

Contra, &c.

Sofpiro. A Rest, or to be silent Softenuto. Equal and Steady Sound. The Object of Musick. Sotto. Below, or below the Subject

Spatium The Spaces between the five Lines

Spirito, or With Life, Spirit, and Vigour Spiritoso.

Staccato. Labouring to express the Passion of the Subject

Staff. The five Lines of Musick

Stentato. Labouring to Express the Passions of

of the Subject

Stretto. Shortened, or Measure made very quick Srementi. Signifies Instruments
Style. The Manner of composing, performing, &c

Sub. Signifies below

Subito. Quick, or quickly

Svegliato. Brisk, gay, and lively

Supposition. Two Notes used in equal Time, one being a Discord; supposes the other to be

a Condord. Supra. Below

Syncopation. Notes divided with, and drove through Bars, &c.

System. An Interval, containing many leffer ones

T.

T. often flands for Tutti, and for Trillo. tr.

Tablatura, Letters standing for Notes Tacet. Be filent, or Rest

Tardo. Very flow, much the same as Largo Tattoo. A Drum Lesson, calling to Quarters Terpermenta. To change imperfect Cords, to

be as Perfect

Tempo. Signifies Ime

Tenderment. Tenderly, fost, and gentley Tenor. The first Octave above the Bass; being the ordnary Pitch of all Voices, or the Fa-

burden or leading Part of any Composition

Trecet A Third

Treza.

Trezetto. Three Parts

Trezo: Testo. The Text, or main Subject

Theory. The natural Causes, Grounds, &c.

Thesis. A falling of Notes. Third. A concording Interval.

Thorough-Bass. The continual, or Figuar'd Bass

Threnody. A Funeral Song

Time. The affection or Sound, long or short Timoreso. With Dread, Fear, and Respect Tempogiustio. Time equal and harmonious Toccata. An Air play'd to the Organ Extempore Tone. The Property of Sound, whether Grave.

or Acute

Transposition. A Removing from one Key to another

Tre, Three

Treble. Three Fold, being the 3d Off ave above the Bass

Tremolo. The Trillo, tr, or to shake a Note

Trio. Three Parts
Tripla. When Time moves by Threes
Triplagion. A Church Hymn, with three Holies
Trite. Three, or the Third
Tritone. The greater, or major Third
Tune. The Property of Sound, Grave, and Acute

#### V

Verto. Turn over the Leaf Vibration. The trembling Motion of Sound, Strings, &c.

Vigoroso, or Vigorosoamente. With Strength and Vigour Villanella. A Peasant-like, Country Dance Visto, or Vistamente. Quick, without Loss of Time Vivace. With Life and Spirit Vivacessimo. Very quick and lively Unison. Two or more Notes in one Sound Vocal. Musick performed by Voices Voce sola. A single Voice. Volta. Once, or one Time Volti so pace. Turn over if you please

### Z.

Zimri. An ancient Vain-glorious conceited Musician, who, because he could not out-do his Master Ela in the Art of Musick, he murder'd him, that in order he might become more samous.







