Equiton

A Notation for Music

Mark Gould

Preface

Equiton was originally devised by Rodney Fawcett and published by him in Zurich in 1958. I own an original copy of this publication.

Erhard Karkoschka has written about Equiton in his book 'Notation in New Music' published by Universal Edition, and in his article 'Ich Habe Mit Equiton Komponiert' in the journal Melos.

The rhythmic notation presented here is my own original work. As all music notations should be free, I ask no royalty, but would ask you to give my name a mention if you do use the rhythmic notation used here.

If you received a copy other than downloading it from my website:
http://www.equiton.net
Please email me
mark@equiton.net
with 'equiton notation' in the subject line. On the website you will find some blank music paper with three-line Equiton staves on them in different sizes.

Purpose of Equiton

- To provide an unambiguous notation for music
- To notate pitch as simply as possible
- To present rhythm as clearly as possible
- To reduce the number of symbols required for accurate notation to the minimum possible

Components of Equiton

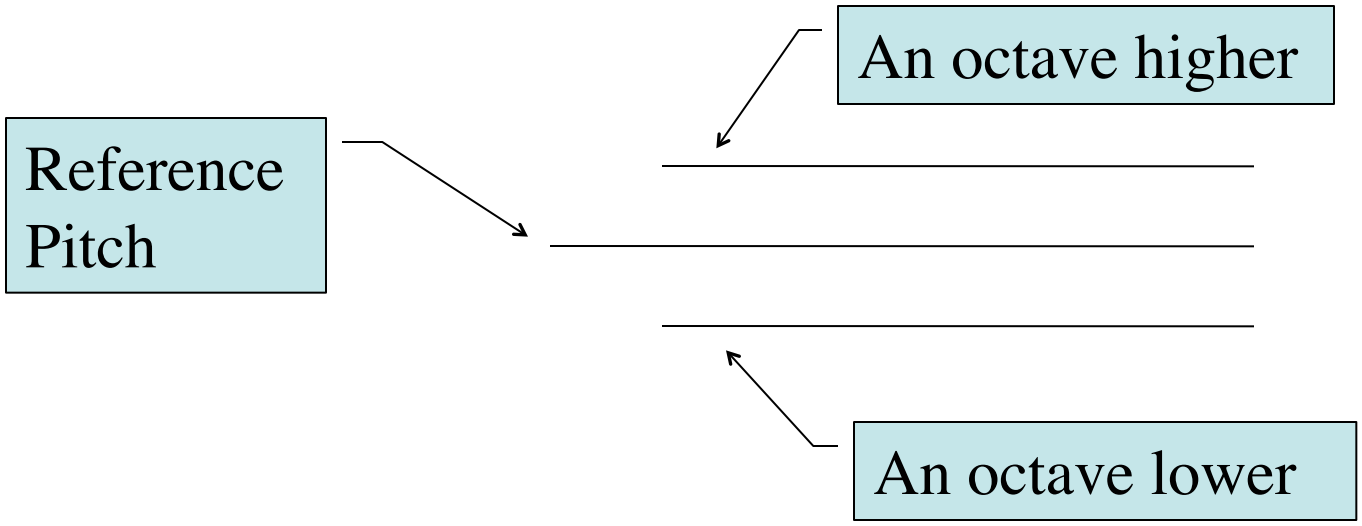
- Pitch
- Rhythm
- Technique
- Expression
- Miscellaneous Symbols and Markings

Equiton Pitch Principles

- To notate a given pitch in all octaves in the same graphical location on the stave
- To reduce the number of pitch-locating symbols (stave lines, ledger lines) to a minimum
- To permit the notation of any octave-repeating pitch system.

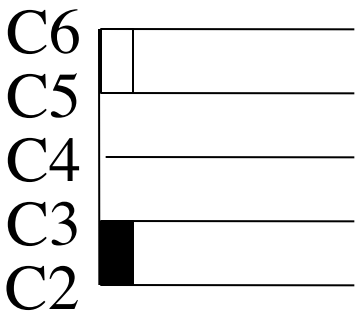
Pitch and Register

Equiton notates pitch in relation to a reference pitch line or ‘stave line’. This line represents one pitch only and its images in higher and lower octaves.



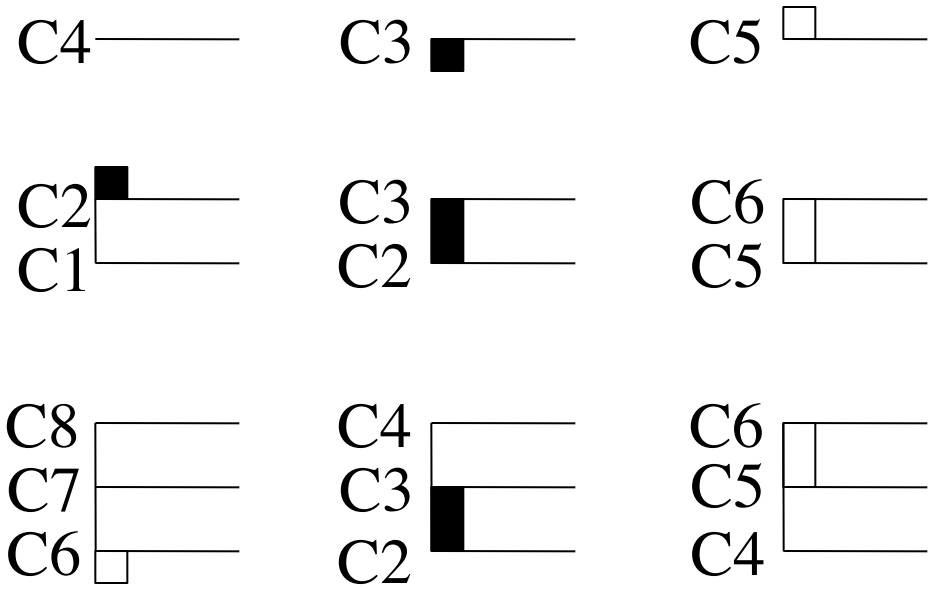
Clefs and Staves 1

A stave line by itself represents the reference pitch, which is taken to be middle C. Middle C is usually referred to as C4, with C3 being the C an octave lower and C5 being an octave higher. Equiton notates the range from C5 to C6 with an open rectangle and the range from C2 to C3 with a solid rectangle:



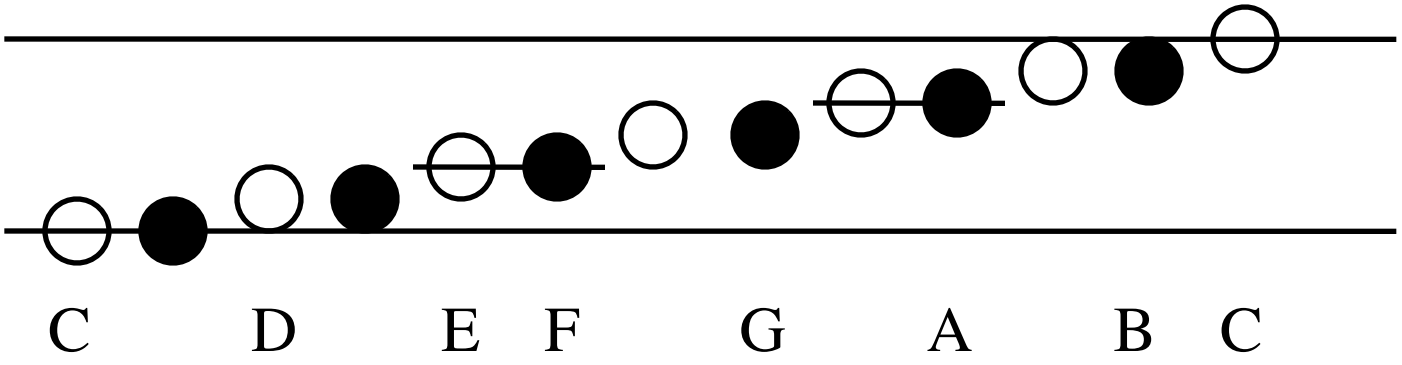
Clefs and Staves 2

A stave can have one or more lines, and the stave register markers are used to indicate the range of the stave. Below are some examples of staves from one to three lines



Pitch Symbols

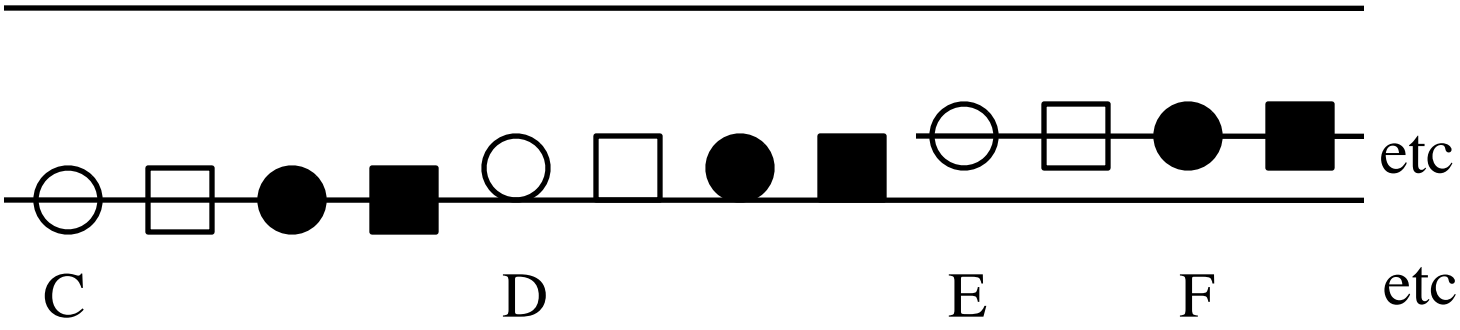
The most commonly used symbols for pitch in Equiton are white and black circles. A white circle placed on a stave line represents the note C. Below is the standard Equiton representation for the equal tempered scale of twelve notes:



Microtones

Music written using pitches other than those of the equal-tempered twelve-note scale requires symbols other than the standard circles. Equiton is unique in notations in that it has no bias for any notation of pitch that is octave repeating. All that Equiton requires is an explanatory table of symbols used and the pitches they represent. Below are the commonly used set of symbols for Equiton, but the user may extend the notation to suit their needs:

Quarter-tone Scale



This is just one example amongst many possibilities

Rhythm and Meter

- The notation proposed here is entirely new
- The purpose of this notation is to render rhythms unambiguously and clearly
- The notation should be able to handle any rhythm notatable with traditional symbols
- The notation should be as simple as possible

Rhythm Components

- Meter - bars and numbers of beats in them
- Duration - beats and their subdivisions
- Tempo

Tempo

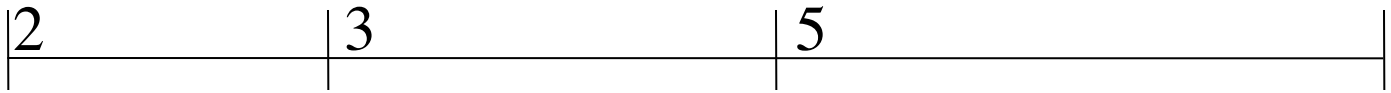
Tempo is indicated in the usual way, as a number of beats per minute. This is written as a number inside a beat symbol:

To indicate a proportional tempo change, then the relationship between the tempos is shown:

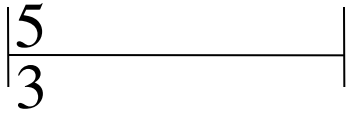
2 → 3 which means 2 old beats equals 3 new beats

Meter

Equiton notates meter very simply - it is just a number indicating the number of beats in the bar written at the start of the first bar and every bar where it changes:



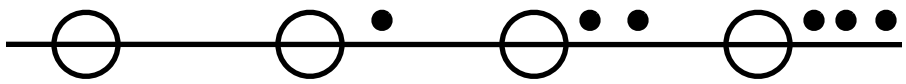
Equiton handles fractional meters by adding a second number below the meter number. This number represents the fraction of a beat and the meter number represents the number of these fractions of a beat:



This means ‘five 1/3rds of a beat’

Basic Rhythm : Beats

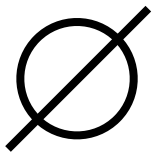
A beat is represented by a symbol by itself. One or more dots placed after the symbol indicate the number of extra beats duration that the note extends over:



1 beat 2 beats 3 beats 4 beats, and so forth

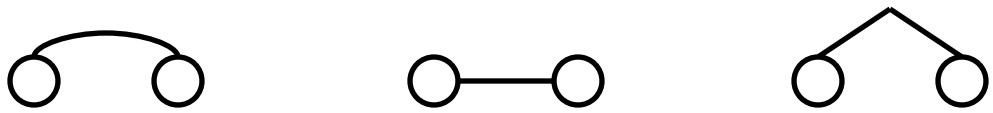
Rests

Equiton uses a single symbol to indicate a rest. Equiton uses the simple principle that a symbol continues to sound until either another symbol or a rest symbol occurs. Therefore the tie is eliminated from Equiton rhythmic notation. The rest symbol is written as a ‘null’ sound:



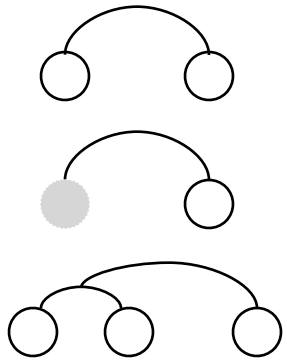
Rhythmic Divisions

The basic principle of Equiton rhythmic division is connection. One symbol by itself is a beat unless modified by the addition of beat dots. Two symbols joined horizontally in time each occupy half a beat, three joined symbols represent three one-thirds of a beat, and so forth. The means of joining is very simple: a line, angled, straight or curved may be used:



Rhythmic Subdivision

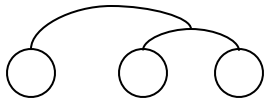
Rhythmic subdivision is also very simple: wherever a pitch symbol occurs it can be replaced by a group of symbols connected to the point where the single symbol would have joined to:



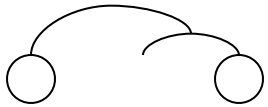
1/4 1/4 1/2

Using Invisible Symbols 1

Suppose we wished to notate a rhythm of 3/4 + 1/4 of a beat. First we draw the correctly subdivided beat to have symbols where we want them:

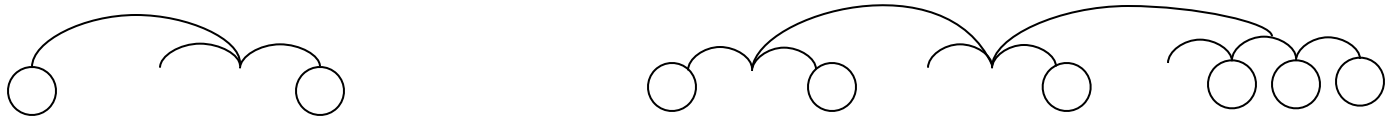


Next, we make one of the symbols invisible. The previous visible symbol continues to sound through the invisible one, until the next visible symbol occurs:

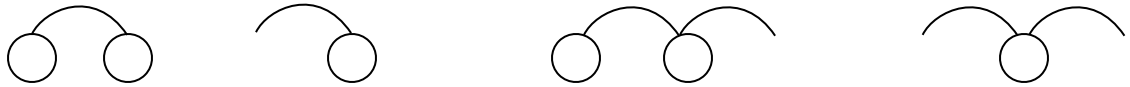


Using Invisible Symbols 2

The use of invisible symbols permits the notation of many types of rhythm not possible in traditional notation without the use of involved ties:

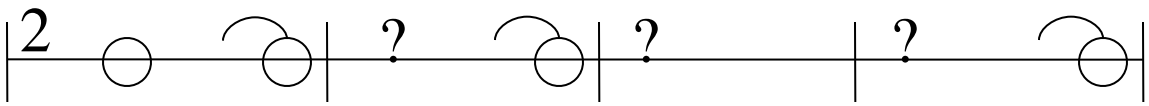


Invisible symbols can be used as the first symbol of a beat so syncopations can be notated:

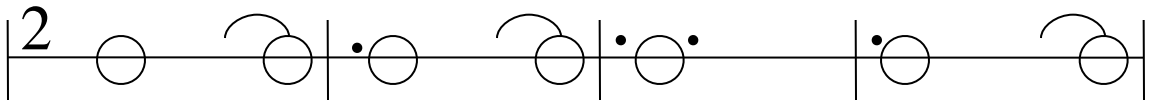


Other Uses of the Dot 1

Sometimes, there are places when an invisible symbol would need to be one or more beats long. In this case there are no connecting lines to indicate the presence of an invisible symbol:

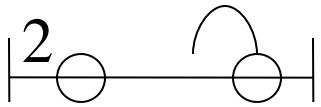


So we make invisible symbols visible with a dot:



Other Uses of the Dot 2

This use of the dot is also useful for system and page breaks, where the reader needs reminding of what note is sounding. In these situations, a dot may also precede the first symbol in a beat group:



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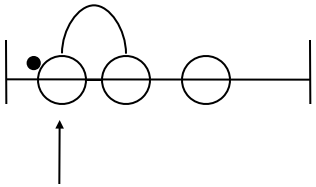
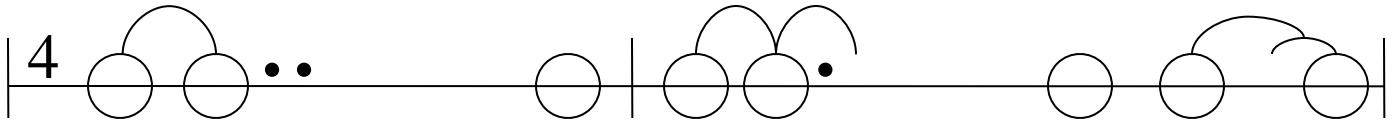


This symbol is tied over

Other Uses of the Dot 3

Finally, there is one last use of the dot. Where an invisible beat occurs within a bar, it is not necessary to make this beat visible with a dot, instead the invisible beat or beats are replaced by dots following the last visible symbol in the bar:

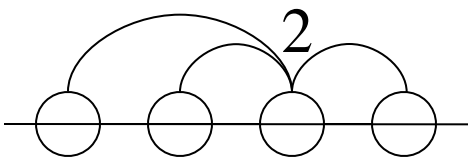


This use of the dot enables the reader to count through the bar easily, and attaches the invisible continuation symbols to the last visible symbol clearly.

Complex Rhythms 1

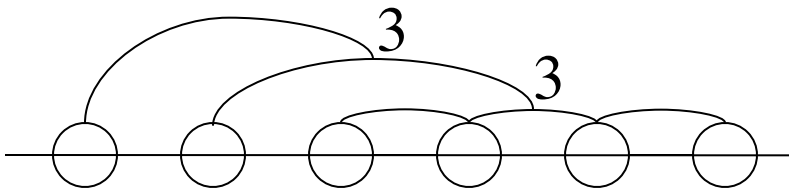
Sometimes, a rhythm will occur that cannot be a simple division of the beat. As an example, how would Equiton notate a rhythm where a beat was divided into three parts, but that there were three notes taking up the duration of two of those parts?

The answer is to write a numeral over the joint between the complex group indicating how many divisions it takes up:

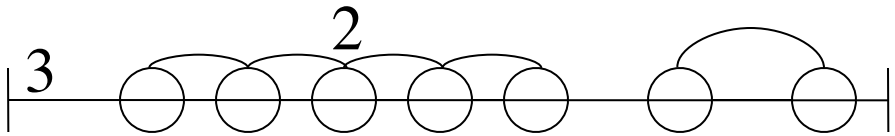


Complex Rhythms 2

The numerals can also be used in nested situations:



Such complexities do not occur often, but notice the simplicity with which Equiton handles them. It should go without saying that this process can be extend over multiple beats:

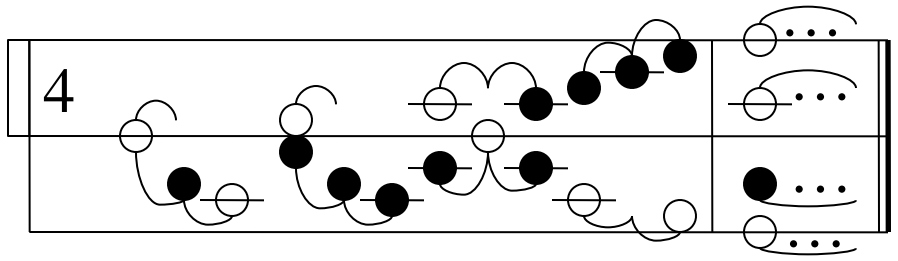


Part Writing

Often, music is written with more than one part or voice on a stave. A good example of this is piano music. In these cases, it is important to differentiate between the parts. In most situations, two parts are written to a stave. In this case, Equiton can be used with connections to the top side of the symbols for the upper part, and to the lower side for the lower part. Symbols shared by both voices can have connections both above and below. Three and four voices can be handled by connecting voice three to the left side of the symbol and the fourth voice to the right side. The next slide gives an example of part writing with Equiton.

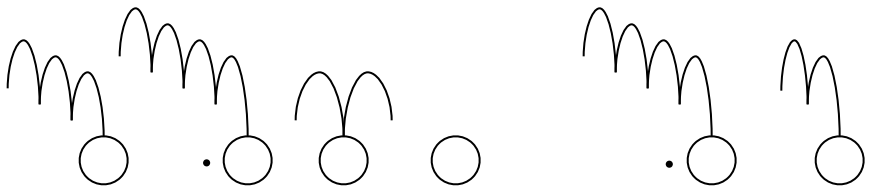
Part Writing Example

Note: the voicing of a single- or multiple beat symbol is given by adding a small extension line to the symbol, attached according to which voice the note belongs to.



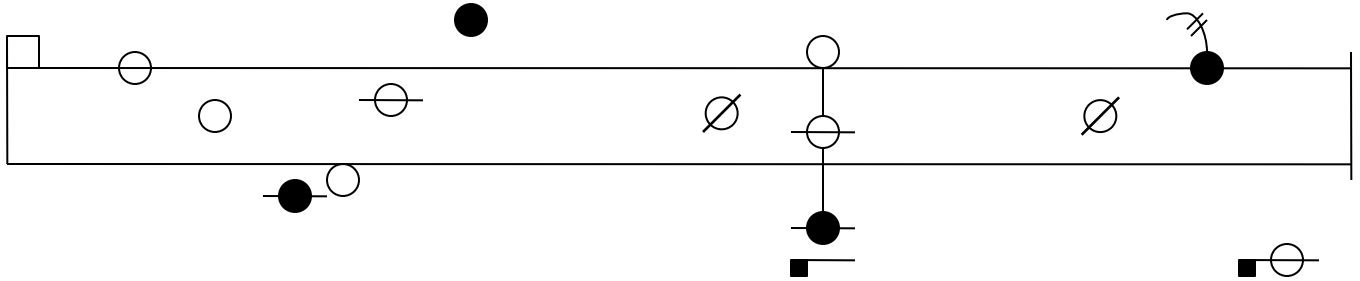
Additive Rhythm

Some musical styles make use of additive rhythm, derived from non-western musical traditions. Messiaen is a composer who uses such rhythms. These rhythms use units of duration independently of a beat, for example: 1/4 tied to 1/5, then 2/3, then a whole beat tied to a 1/5, then 1/3, and so forth. We can notate these in Equiton if we remove the rule about invisible symbols from one beat to the next, and use the prefix dot as a tie. The above rhythm would be notated as:



Free Rhythm

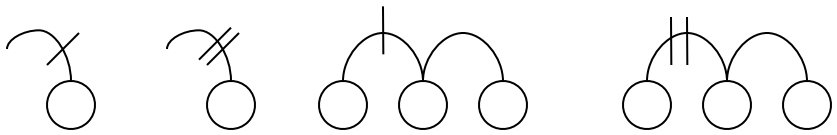
Free rhythm is the easiest notation in Equiton. All markings for duration and meter are removed, and the symbols continue to sound from the time when they begin until a rest or another symbol occurs.



The symbol with a tail and two strokes is a grace-note. The next slide will explain all. The vertical line between symbols means: ‘attack as a chord.’

Grace Notes

Grace-notes come in two forms. The acciaccaturas, or crushed note, and the appoggiaturas, or leaning note. These are notated using principles from ‘additive rhythm’ and are notated as if they were half-beats, but with strokes through the connecting line. One stroke means ‘appoggiatura and two means ‘acciaccatura.’ Groups of symbols are notated like a group in an equally divided beat, but the first connecting line has the stroke though it:



Technique

Technique markings are the same as for traditional notation. For example, pizz., for pizzicato ad so forth. Also, bowing markings and other technique markings are not different in Equiton.

Articulation

Equiton makes three uses of the dot. To use it also as an articulation marking would overload its use too much, and so it is replaced by the marking '\'. Consequently the tenuto marking, -, is replaced by '/'. Other articulation markings are kept the same as traditional notation.

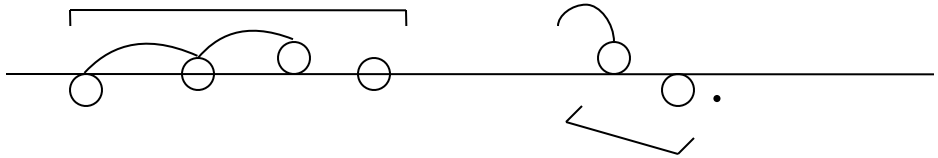
Expression

The most basic expression markings are dynamics and hairpins. These markings are not different in Equiton, except in the regard that they should be rendered in a font appropriate with Equiton's more modern layout.

Markings such as 'dolce' and similar, remain the same as traditional notation, with the provision that they too should be rendered in the same font as other expression markings.

Miscellaneous Symbols

Music has a plethora of symbols used in many different contexts, trill markings, ornaments, technique marks, fingerings, chord markings, and many others. These markings are all retained by Equiton in so far as they do not conflict with Equiton's basic notational symbols. One notation that does change is the phrase or slur. As I use the curved line to indicate rhythmic connection, the square bracket is used to indicate slurs and phrasing. If another type of connecting line were used for rhythm, then the slur could be written with a curved line.



Conclusion

Equiton is a complete notation, it can notate a great range of musics and can notate more than traditional notation. The rhythmic notation for Equiton is my own creation, and is not the notation originally associated with Equiton. I cannot assume that it is a final alternative, but as Schoenberg says 'it grows under my hands,' and it suggests solutions for problems, in a clear and logical manner, almost by itself.

All I hope is that the reader try it for themselves.

Postscript

Notation evolves. It would be churlish of me not expect that the notation will change. To that end, I am open to constructive comments and suggestions about Equiton.