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(54) **Title:** SYSTEM OF COLOURED KEYS AND NOTATION FOR MUSIC INSTRUCTION

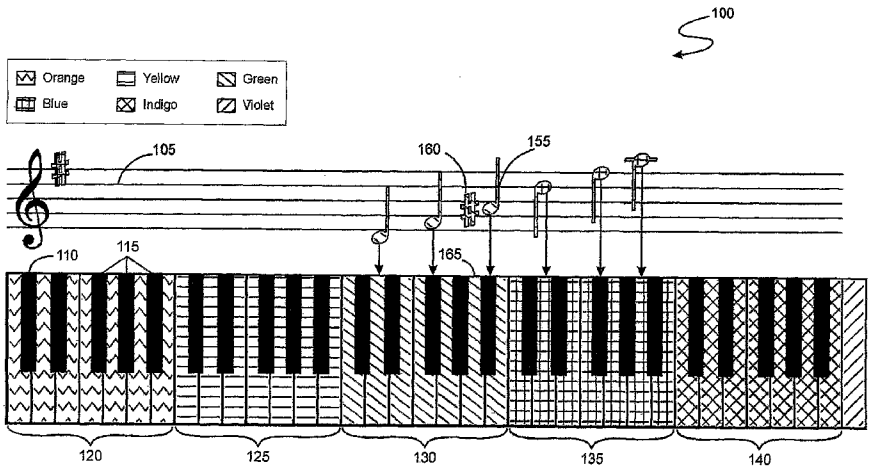

FIG. 1

(57) **Abstract:** A system of colored keys and music notation for keyboard-based instruments including a keyboard-based instrument having a multiple of octaves and one or more octaves of the multiple of octaves is colored and a set of instructions including one or more music notations corresponding to the one or more octaves of the multiple of octaves.

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"SYSTEM OF COLOURED KEYS AND NOTATION FOR MUSIC INSTRUCTION"

FIELD OF INVENTION

Embodiments of the present invention relate to the field music pedagogy, and more particularly, to a system of coloured octaves and music notation to facilitate sight-reading for keyboard-based instruments.

BACKGROUND OF INVENTION

Typically, learning of music involves retaining musical notation in mind. The information derived there from is then implemented to a musical device to enable the performance of a performer. Sight-reading is one of the most important topics in music learning. Yet it is also one of the most dreaded ones. Sight-reading means reading music notation from a given score and playing the notes directly on the instrument, in time with the rhythm of the piece. Students generally perform this activity through the tedious process of mentally converting each note in the musical score to its equivalent letter name, i.e., C, D, E, F, G, A, B and their associated sharps and flats; and then playing on the instrument, the key that corresponds to this letter name.

Adding to this difficulty is the concept of 'octaves'. Each of the 7 letter names from C to B, together with their associated sharps and flats, are repeated several times on the keyboard. This set of 12 repeating notes is called an "octave", and the number could go up to even 7-8 octaves in a piano. Hence, in addition to figuring out the letter name of each note on the score, the student also has to figure out which octave that note belongs to.

The student is so preoccupied with these mental calculations that the performance ends up sounding stilted and unmusical. It takes many years of tedious practice, hard work and frustration for a student to become proficient in sight-reading.

Conventionally, the system of colored keys and music notation available confuse the student because some systems assign seven different colors to the seven white keys of an octave, while some assign twelve different colors to all the keys of an octave. This combination of colors is repeated several times throughout the instrument, depending on the number of octaves. The resultant instrument is so

colorful that it is bedazzling and confusing to the eye of the student. Even though the student knows the color of the key he has to play based on the musical score, he is at an absolute loss to know which octave he has to play in because each color is repeated several times on the instrument. There are so many colors on both the instrument and the score that it becomes very difficult for the student to comprehend and visually link up the colors of the score and the instrument. Moreover, the student is so preoccupied with frantically and blindly trying to match the colors on the score with the colors on the instrument, that it is doubtful whether he achieves any meaningful musical growth in the process. Furthermore, hours of practicing on such a colorful instrument and with such a colorful score could result in eyestrain and headaches, thus reducing the efficiency and ability of the student to practice consistently on such systems.

In other situations, the one or more systems make the student dependant. By indicating through the color coding the exact location of the note to be played eliminates the need for mental calculation or effort on the part of the student. Moreover, they make the process of sight-reading so mechanical that the student is reduced to simply pressing a key based on the color he or she sees. There is no cognition or development of a sense of pitch, which is very vital to a musician. The result is that the student becomes completely dependent on the color cues of these systems and subsequently becomes completely crippled in their absence. However, if the student is asked to perform on the conventional black and white keyed instrument or with the conventional black-noted musical score he would flounder in spite of a high proficiency in sight-reading in these color-based systems. The ability to adapt to the conventional system after learning through these systems is very poor, and a complete transition would again take a lot of time and practice; the same problems that these systems were designed to overcome.

Furthermore, in many systems the basic structure of the standard conventional music notation system has been changed to such an extent that makes it unrecognizable to conventional mainstream users and consequently, not universally acceptable. Another drawback is that students who have trained through these systems are unable to comprehend and understand the conventional system of musical notation. This severely restricts their ability to expand their repertoire, since musical scores in the market are generally available only in the standard

format of musical notation. It similarly restricts their ability to share their compositions with peers not trained in these systems.

U.S. Patent No. **6831220** issued on **14 December 2004** to **Varme,** for **"System for playing music having multi-colored musical notation and instruments"** describes a system including each of the 12 keys of an octave, both black and white, are each given a distinct color. The 7 white keys of an octave are assigned 7 distinct colors and each black key is colored with alternating bands of the 2 colours of the 2 white keys on either side of it. However this invention is very confusing due to the excessive use of color and the multi-coloured bands on the black keys. Moreover, the system deviates substantially from the standard conventional system. Furthermore, the system changes the manner in which sharp and flat notes are depicted. Consequently, a student is unable to play using the standard conventional musical notation which severely restricts his repertoire.

U.S. Patent No **6870085** issued on **22 March, 2005** to **Jane S. MacCutcheon** titled **"Music teaching system and method"** describes a system including a separate animal image which is assigned to each of the 7 white keys in an octave each with its own distinct colour. The same animal images and colours are used to represent the white keys on a corresponding system of musical notation. The black keys are assigned with the 2 separate animal images and their corresponding colours, belonging to the 2 white keys on either side of them. On the musical score, a black key is represented by the animal image and colour of the white key to which it is related. However, the attempt to match the colour name and animal name of each note to its letter name has resulted in colour and animal names that are forced and not very user-friendly. For e.g., 'A' for Amethyst Ant, 'E' for Electric Eel, 'F' for Flame Fox, 'G' for Green Gator. Moreover, it is very difficult to remember and associate these colour and animal names with their respective notes and keys subsequently making the process of sight-reading far more complex.

U.S. Patent No **2221143** issued on **12 November, 1940** to **Lang** titled **"System and apparatus for piano instructions"** describes a system in which 12 separate colours has been assigned to all the 12 keys of an octave. However, the system introduces its own system of notation, completely different from the existing, conventional system of notation, without any staff or clef. Moreover, the notes in the

system are depicted as boxes of varying width, coloured with the same colour as the keys to which they correspond on the keyboard.

Accordingly, there exists a need in the art, to provide a system of colored keys and music notation for keyboard-based instruments. The system of colored keys and music notation for keyboard-based instruments facilitates sight-reading for keyboard-based musical instruments through the employment of colors.

OBJECT OF THE INVENTION

The principal object of the present invention is to introduce a unique colour-based system of music pedagogy for keyboard-based instruments, to help students to develop the essential skill of sight-reading in a more intuitive and user-friendly manner, by reducing the amount of time and struggle inherently involved in the process.

Another objective of the present invention is to introduce a color-based system of music pedagogy that restricts the employment of color to about five to about six main colors, appearing together in groups to avoid further confusing and bedazzling the student, unlike some of the prior art inventions.

Another objective of this invention is to introduce a unique colour-based system of music pedagogy that does not spoon feed the student by indicating the exact note to be played but encourages him to calculate and think for himself by indicating only the octave that has to be played, and thus helps him to develop a sense of pitch, which is vital to musicians.

STATEMENT OF INVENTION

Accordingly the present invention provides a system of colored keys and music notation for keyboard-based instruments including a keyboard-based instrument having a multiple of octaves and one or more octaves of the multiple of octaves is colored and a set of instructions including one or more music notations corresponding to the one or more octaves of the multiple of octaves. The one or more colors could be assigned such that only the white keys, or only the black keys, or both white keys and black keys of each octave are colored with the one or more colors, or such that different groups of keys in each octave are coloured with a lighter variation or with a darker variation of the same colour assigned to the octave. There

is also provided a corresponding system of colored music notation, wherein each note of a standard musical score is coloured with the same colour as the key to which it corresponds to on the keyboard-based instrument.

SUMMARY OF INVENTION

Embodiments of the present invention relates to a system of colored keys and music notation for keyboard-based instruments including a keyboard-based instrument having a multiple of octaves and one or more octaves of the multiple of octaves is colored and a set of instructions including one or more music notations corresponding to the one or more octaves of the multiple of octaves.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a top view of a system of colored keys of a keyboard-based instrument and a schematic view of a music notation for the keyboard-based instrument, according to various embodiments of the present invention.

FIG. 2 illustrates a top view of a system of colored keys having each octave of a keyboard-based instrument colored with at least one color and a schematic view of a music notation for the keyboard-based instrument having an identical color as that of each key of the multiple of keys to which it corresponds on the keyboard-based instrument, according to various embodiments of the present invention.

FIG. 3 illustrates a top view of a system of colored keys having at least one white key of a plurality of keys of a keyboard-based instrument colored and a schematic view of a music notation for the keyboard-based instrument having an identical color as that of the white key of the plurality of keys of the keyboard-based instrument to which it corresponds on the keyboard-based instrument, according to various embodiments of the present invention.

FIG. 4 illustrates a top view of a system of colored keys having at least one white key and at least one black key of a plurality of keys of a keyboard-based instrument colored and a schematic view of a music notation for the keyboard-based instrument having an identical color as that of each key of the plurality of keys to which it corresponds on the keyboard-based instrument, according to various embodiments of the present invention.

FIG. 5 illustrates a top view of a system of colored keys having a lighter variation and/or a darker variation of at least one color for a plurality of keys of a keyboard-based instrument and a schematic view of a music notation for the keyboard-based instrument having an identical color as that of each key of the plurality of keys to which it corresponds on the keyboard-based instrument, according to various embodiments of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

So that the manner in which the above recited features of the present invention can be understood in detail, a more particular description of the invention, briefly summarized above, may be had by reference to embodiments, some of which are illustrated in the appended drawings. It is to be noted, however, that the appended drawings illustrate only typical embodiments of this invention and are therefore not to be considered limiting of its scope, for the invention may admit to other equally effective embodiments.

These and other features, benefits and advantages of the present invention will become apparent by reference to the following text figures, with like reference numbers referring to like structures across the views, wherein:

FIG. 1 illustrates a top view of a system 100 of colored keys of a keyboard-based instrument 110 and a schematic view of a music notation 105 for the keyboard-based instrument 110, according to various embodiments of the present invention. The system 100 of colored keys and the music notation 105 for the keyboard-based instrument 110 includes the keyboard-based instrument 110 having a multiple of octaves. One or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves are colored.

The one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves of the keyboard-based instrument 110 are colored with one or more color. The system 100 further includes a set of instructions including one or more music notations 105 corresponding to the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves, having an identical colour as that of each key of ~~the multiple of keys to which it corresponds on the keyboard~~ based instrument 110, according to various embodiments of the present invention.

In some embodiments of the present invention, the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves of the keyboard-based instrument 110 are colored with one or more lighter variation of the one or more colors.

In some embodiments of the present invention, the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves of the keyboard-based instrument 110 are colored with one or more darker variation of the one or more colors.

In some embodiments of the present invention, the one or more white keys of the multiple of keys of the keyboard-based instrument 110 are assigned a sequence of two or more rainbow colors of the one or more colors to one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves in succession, starting from a lowest octave to a highest octave of the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves.

In some embodiments of the present invention, the music notation 105 of the keyboard-based instrument 110 are assigned the sequence of two or more rainbow colors of the one or more colors to one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves in succession, starting from the lowest octave to the highest octave of the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves of the keyboard-based instrument 110 are colored with a different color. However, one or more black keys 115 of the keyboard-based instrument 110 remain black in color. For example a first octave 120 of one or more white keys of the keyboard-based instrument 110 are orange in color, a second octave 125 of the one or more white keys of the keyboard-based instrument 110 are yellow in color, a third octave 130 of the one or more white keys of the keyboard-based instrument 110 are in green color, a fourth octave 135 of the one or more white keys of the keyboard-based instrument 110 are blue in color, a fifth octave 140 of the one or more white keys of the keyboard-based instrument 110 are indigo in color, a sixth octave (not shown) of the one or more white keys of the keyboard-based instrument 110 are violet in color and a seventh octave (not

shown) of the one or more white keys of the keyboard-based instrument 110 are red in color.

In some embodiments of the present invention, the system 100 further includes one or more white keys of the keyboard-based instrument 110 which are colored with the one or more lighter variation of the one or more colors.

In some embodiments of the present invention, the system 100 further includes one or more white keys of the keyboard-based instrument 110 which are colored with the one or more darker variation of the one or more colors.

In some embodiments of the present invention, the sequence of two or more rainbow colors of the one or more colors assigned to the one or more white keys of the multiple of keys of the keyboard-based instrument 110 are repeated from a eight octave of the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more white keys of the multiple of keys of the keyboard-based instrument 110 are colored either by dyeing at a time of manufacture, or by application of a paint on the one or more white keys of the multiple of keys, or by deploying a multiple of colored adhesive stickers, or by placing colored overlays on the one or more white keys of the plurality of keys, or by fixing a multiple of colored lighting or a multiple of LEDs (Light Emitting Diodes) on near and/or within the one or more white keys of the multiple of keys, or by projection of a multiple of colored lights by mounting onto the keyboard-based instrument 110, or in a form of a virtual instrument projected with a multiple of colored lights and the like that serves the purpose of coloring the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves.

In some embodiments of the present invention, the set of instructions includes the musical score having the multiple of notes. Every music notation 105 of the multiple of notes for the keyboard-based instrument 110 are colored with the one or more lighter variation of the one or more colors corresponding to the one or more white key of the multiple of keys of the keyboard-based instrument 110.

In some embodiments of the present invention, the set of instructions includes the musical score having the multiple of notes. Every music notation 105 of the multiple of notes for the keyboard-based instrument 110 are colored with the one or

more darker variation of the one or more colors corresponding to the one or more white key of the multiple of keys of the keyboard-based instrument 110.

However, the music notation 105 of the multiple of notes for the keyboard-based instrument 110 corresponding to one or more black keys 115 of the keyboard-based instrument 110, is colored with an identical color of the one or more colors corresponding to the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves to which the one or more black keys 115 of the multiple of keys of the keyboard-based instrument 110 belong.

In some embodiments of the present invention, each accidental note (for e.g., 155) of the multiple of notes are colored with the identical color, or with the identical colour of the one or more lighter variation and / or the one or more darker variation of the one or more colors of a natural note (for e.g., 165) of the multiple of notes to which each accidental note (for e.g., 155) of the multiple of notes are related on the musical score 105.

In some embodiments of the present invention, one or more accidental symbols (for e.g., 160) are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of the each accidental note (for e.g., 155) of the multiple of notes on the musical score 105.

In some embodiments of the present invention, the one or more music notation 105 of the multiple of notes for the keyboard-based instrument 110 are in the form of a printed score, a computer program product embodied on a tangible computer readable medium for operating a computer to play the one or more music notation 105, a game console, an electronic device, a video and the like deployed for color coding of the one or more octaves (for e.g., 120, 125, 130, 135,140 and the like) of the multiple of octaves of the multiple of keys of the keyboard-based instrument 110.

In some embodiments of the present invention, the one or more keyboard-based instruments 100 may include a piano, an electronic keyboard, a digital keyboard, a synthesizer and the like.

FIG. 2 illustrates a top view of a system 200 of colored keys having each octave (for e.g., 220, 225, 230, 235, 240 and the like) of the multiple of octaves of a

keyboard-based instrument 210 colored with one or more colors and a schematic view of a music notation 205 for the keyboard-based instrument 210 having an identical color as that of each key of the multiple of keys to which it corresponds on the keyboard-based instrument 210, according to various embodiments of the present invention.

In some embodiments of the present invention, each octave (for e.g., 220, 225, 230, 235,240 and the like) of the multiple of octaves of the keyboard-based instrument 210 are colored with the one or more colors. However, the one or more white keys and the one or more black keys (for e.g., 215, 216, 217, 218,219 and the like) of the multiple of keys of the keyboard-based instrument 210 are colored with the one or more colors assigned to each octave (for e.g., 220, 225, 230, 235,240 and the like) of the multiple of octaves of the keyboard-based instrument 210. For example a first octave 220 of one or more white keys of the keyboard-based instrument 210 are orange in color, a second octave 225 of the one or more white keys of the keyboard-based instrument 210 are yellow in color, a third octave 230 of the one or more white keys of the keyboard-based instrument 210 are in green color, a fourth octave 235 of the one or more white keys of the keyboard-based instrument 210 are blue in color, a fifth octave 240 of the one or more white keys of the keyboard-based instrument 210 are indigo in color, a sixth octave (not shown) of the one or more white keys of the keyboard-based instrument 210 are violet in color and a seventh octave (not shown) of the one or more white keys of the keyboard-based instrument 210 are red in color.

In some embodiments of the present invention, the one or more white keys, and / or the one or more black keys (for e.g., 215, 216, 217, 218,219 and the like) of the multiple of keys of the keyboard-based instrument 210 are assigned a sequence of two or more rainbow colors of the one or more colors to the one or more octaves (for e.g., 220, 225, 230, 235, 240 and the like) of the multiple of octaves in succession, starting from a lowest octave to a highest octave of the one or more octaves (for e.g., 220, 225, 230, 235, 240 and the like) of the multiple of octaves.

In some embodiments of the present invention, the sequence of two or more rainbow colors of the one or more colors assigned to the one or more white keys, and / or the one or more black keys (for e.g., 215, 216, 217, 218, 219 and the like) of the multiple of keys of the keyboard-based instrument 210 are repeated from a eight

octave of the one or more octaves (for e.g., 220, 225, 230, 235, 240 and the like) of the multiple of octaves.

In some embodiments of the present invention, the set of instructions includes the musical score having the multiple of notes. Every music notation 205 of the multiple of notes for the keyboard-based instrument 210 are colored with the one or more darker variation of the one or more colors corresponding to the one or more white keys and / or the one or more black keys (for e.g., 215, 216, 217, 218,219 and the like) of the multiple of keys of the keyboard-based instrument 210.

In some embodiments of the present invention, the set of instructions includes the musical score having the multiple of notes. Every music notation 205 of the multiple of notes for the keyboard-based instrument 210 are colored with the one or more lighter variation of the one or more colors corresponding to the one or more white keys and / or the one or more black keys (for e.g., 215, 216, 217, 218,219 and the like) of the multiple of keys of the keyboard-based instrument 210.

In some embodiments of the present invention, the one or more music notation 205 of the multiple of notes for the keyboard-based instrument 210 is assigned the sequence of the two or more rainbow colors of the one or more colors to the one or more octaves (for e.g., 220, 225, 230, 235,240 and the like) of the multiple of octaves in succession, starting from the lowest octave to the highest octave of the one or more octaves (for e.g., 220, 225, 230, 235,240 and the like) of the multiple of octaves.

In some embodiments of the present invention, the sequence of the two or more rainbow colors of the one or more colors on the one or more music notation 205 of the multiple of notes for the keyboard-based instrument 210 are repeated from the eight octave of the one or more octaves (for e.g., 220, 225, 230, 235,240 and the like) of the multiple of octaves.

In some embodiments of the present invention, each accidental note (for e.g., 255) of the multiple of notes are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of a natural note (for e.g., 265) of the multiple of notes to which each accidental note (for e.g., 255) of the multiple of notes are related on the musical score 205.

In some embodiments of the present invention, one or more accidental symbols (for e.g., 260) are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of the each accidental note (for e.g., 255) of the multiple of notes on the musical score 205.

FIG. 3 illustrates a top view of a system 300 of colored keys having one or more white keys (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of a multiple of keys of a keyboard-based instrument 310 colored and a schematic view of a music notation 305 for the keyboard-based instrument 310 having an identical color as that of the white key (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of the multiple of keys of the keyboard-based instrument 310 to which it corresponds on the keyboard-based instrument 310, according to various embodiments of the present invention.

In some embodiments of the present invention, the system 300 further includes one or more white keys (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of the keyboard-based instrument 310 which are colored with a one or more darker variation and/or a one or more lighter variation of the one or more colors. The one or more black keys 315 of the keyboard-based instrument 310 remain black in color.

In some embodiments of the present invention, the first three white keys 360, 370, 380, 388, 393 and the like of the keyboard-based instrument 310 of each octave (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves are of a lighter variation of the one or more colors than the subsequent one or more white keys 365, 375, 385, 390, 395 and the like which are of a darker variation of the one or more colors of each octave (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves.

In some embodiments of the present invention, the first three white keys 360, 370, 380, 388, 393 and the like of the keyboard-based instrument 310 of each octave (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves are of the darker variation of the one or more colors than the subsequent one or more white keys 365, 375, 385, 390, 395 and the like which are of the lighter variation of the one or more colors of each octave (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more white keys (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of the multiple of keys of the keyboard-based instrument 310 are assigned a sequence of two or more rainbow colors of the one or more colors to the one or more octaves (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves in succession, starting from a lowest octave to a highest octave of the one or more octaves (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves.

In some embodiments of the present invention, the sequence of two or more rainbow colors of the one or more colors assigned to the one or more white keys (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of the multiple of keys of the keyboard-based instrument 310 are repeated from a eight octave of the one or more octaves (for e.g., 320, 325, 330, 335, 340 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more music notation 305 of the multiple of notes for the keyboard-based instrument 310 are colored with an identical color of the one or more white keys (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of the keyboard-based instrument 310 to which it corresponds on the keyboard-based instrument 310. However, the one or more music notation 305 of the multiple of notes for the keyboard-based instrument 310 corresponding to one or more black keys 315 of the keyboard-based instrument 310 are colored with the identical color as the one or more notes of the one or more white keys (for e.g., 360, 365, 370, 375, 380, 385, 388, 390, 393, 395 and the like) of the keyboard-based instrument 310 adjoining to the one or more black keys 315 of the keyboard-based instrument 310.

In some embodiments of the present invention, each accidental note (for e.g., 355) of the multiple of notes are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of a natural note (for e.g., 359) of the multiple of notes to which each accidental note (for e.g., 355) of the multiple of notes are related on the musical score 305.

In some embodiments of the present invention, one or more accidental symbols (for e.g., 357) are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the

one or more colors of the each accidental note (for e.g., 355) of the multiple of notes on the musical score 305.

FIG. 4 illustrates a top view of a system 400 of colored keys having one or more white keys (for e.g., 460, 465, 470, 475, 480, 485, 488, 490, 493, 495 and the like) and one or more black key (for e.g., 412, 415, 419 and the like) of a multiple of keys of a keyboard-based instrument 410 colored and a schematic view of a music notation 405 for the keyboard-based instrument 410 having an identical color as that of each key of the multiple of keys to which it corresponds on the keyboard-based instrument 410, according to various embodiments of the present invention.

In some embodiments of the present invention, the first three white keys 460, 470, 480, 488, 493 and the like of the keyboard-based instrument 410 of each octave (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves and the one or more black keys (for e.g., 415 and the like) which are deployed between the first three white keys 460, 470, 480, 488, 493 and the like of the keyboard-based instrument 410 are of a lighter variation of the one or more colors than the subsequent one or more white keys 465, 475, 485, 490, 495 and the like and the one or more black keys (for e.g., 412, 419 and the like) which are deployed between next four white keys 465, 475, 485, 490, 495 and the like of the keyboard-based instrument 410 of each octave (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octave are of a darker variation of the one or more colors of each octave (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves.

In some embodiments of the present invention, the first three white keys 460, 470, 480, 488, 493 and the like of the keyboard-based instrument 410 of each octave (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves and the one or more black keys (for e.g., 415 and the like) which are deployed between the first three white keys 465, 475, 485, 490, 495 and the like of the keyboard-based instrument 410 are of a darker variation of the one or more colors than the subsequent one or more white keys 465, 475, 485, 490, 495 and the like and the one or more black keys (for e.g., 412, 419 and the like) which are deployed between next four white keys 465, 475, 485, 490, 495 and the like of the keyboard-based instrument 410 of each octave (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octave are of a lighter variation of the one or more colors of each octave (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more white keys (for e.g., 460, 465, 470, 475, 480, 485, 488, 490, 493, 495 and the like) and one or more black key (for e.g., 412, 415, 419 and the like) of the multiple of keys of the keyboard-based instrument 410 are assigned a sequence of two or more rainbow colors of the one or more colors to the one or more octaves (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves in succession, starting from a lowest octave to a highest octave of the one or more octaves (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves.

In some embodiments of the present invention, the sequence of two or more rainbow colors of the one or more colors assigned to the one or more white keys (for e.g., 460, 465, 470, 475, 480, 485, 488, 490, 493, 495 and the like) and one or more black key (for e.g., 412, 415, 419 and the like) of the multiple of keys of the keyboard-based instrument 410 are repeated from a eight octave of the one or more octaves (for e.g., 420, 425, 430, 435, 440 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more music notation 405 of the multiple of notes for the keyboard-based instrument 410 are colored with an identical color of each key of the multiple of keys of the keyboard-based instrument 410 to which each key of the multiple of keys corresponds on the keyboard-based instrument 410.

In some embodiments of the present invention, each accidental note (for e.g., 455) of the multiple of notes are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of a natural note (for e.g., 459) of the multiple of notes to which each accidental note (for e.g., 455) of the multiple of notes are related on the musical score 405.

In some embodiments of the present invention, one or more accidental symbols (for e.g., 457) are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of the each accidental note (for e.g., 455) of the multiple of notes on the musical score 405.

FIG. 5 illustrates a top view of a system 500 of colored keys having a lighter variation and/or a darker variation of the one or more colors for a multiple of keys of a keyboard-based instrument 510 and a schematic view of a music notation 505 for

the keyboard-based instrument 510 having an identical color as that of each key of the multiple of keys to which it corresponds on the keyboard-based instrument 510, according to various embodiments of the present invention.

In some embodiments of the present invention, the first three white keys 560, 570, 580, 588, 593 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves are of a lighter variation of the one or more colors than the subsequent one or more white keys 565, 575, 585, 590, 595 and the like of the keyboard-based instrument 510 of the each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves. The one or more black keys (for e.g., 562, 572, 582, 586, 592 and the like) which are deployed between the first three white keys 560, 570, 580, 588, 593 and the like of the keyboard-based instrument 510 are of a darker variation of the one or more colors than the first three white keys 560, 570, 580, 588, 593 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves. However, the one or more black keys (for e.g., 564, 574, 584, 589, 594 and the like) which are deployed between next four white keys 565, 575, 585, 590, 595 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octave are of a darker variation of the one or more colors of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves than the subsequent one or more white keys 565, 575, 585, 590, 595 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octave.

In some embodiments of the present invention, the first three white keys 560, 570, 580, 588, 593 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves are of a darker variation of the one or more colors than the subsequent one or more white keys 565, 575, 585, 590, 595 and the like of the keyboard-based instrument 510 of the each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves. The one or more black keys (for e.g., 562, 572, 582, 586, 592 and the like) which are deployed between the first three white keys 560, 570, 580, 588, 593 and the like of the keyboard-based instrument 510 are of a lighter variation of the one or more colors than the first three white keys 560, 570, 580, 588, 593 and the

like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves. However, the one or more black keys (for e.g., 564, 574, 584, 589, 594 and the like) which are deployed between next four white keys 565, 575, 585, 590, 595 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octave are of a lighter variation of the one or more colors of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves than the subsequent one or more white keys 565, 575, 585, 590, 595 and the like of the keyboard-based instrument 510 of each octave (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octave.

In some embodiments of the present invention, the one or more white keys (for e.g., 560, 565, 570, 575, 580, 585, 588, 590, 593, 595 and the like) and / or the one or more black keys (for e.g., 562, 564, 572, 574, 582, 584, 586, 589, 592, 594 and the like) of the multiple of keys of the keyboard-based instrument 510 are assigned a sequence of two or more rainbow colors of the one or more colors to the one or more octaves (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves in succession, starting from a lowest octave to a highest octave of the one or more octaves (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves.

In some embodiments of the present invention, the sequence of two or more rainbow colors of the one or more colors assigned to the one or more white keys (for e.g., 560, 565, 570, 575, 580, 585, 588, 590, 593, 595 and the like) and / or the one or more black keys (for e.g., 562, 564, 572, 574, 582, 584, 586, 589, 592, 594 and the like) of the multiple of keys of the keyboard-based instrument 510 are repeated from a eight octave of the one or more octaves (for e.g., 520, 525, 530, 535, 540 and the like) of the multiple of octaves.

In some embodiments of the present invention, the one or more music notation 505 of the multiple of notes for the keyboard-based instrument 510 are colored with an identical color of each key of the multiple of keys of the keyboard-based instrument 510 to which each key of the multiple of keys corresponds on the keyboard-based instrument 510.

In some embodiments of the present invention, each accidental note (for e.g., 555) of the multiple of notes are colored with the identical color, or with the identical

color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of a natural note (for e.g., 559) of the multiple of notes to which each accidental note (for e.g., 555) of the multiple of notes are related on the musical score 505.

In some embodiments of the present invention, one or more accidental symbols (for e.g., 557) are colored with the identical color, or with the identical color of the one or more lighter variation and / or the one or more darker variation of the one or more colors of the each accidental note (for e.g., 555) of the multiple of notes on the musical score 505.

In some embodiments of the present invention, the colors of the multiple of octaves of the keyboard-based instrument may be colored with one or more combination of colors in one or more order of coloring the one or more octaves of the keyboard-based instrument. The one or more combination of colors that serves the purpose of distinguishing the one or more octaves from each other will be deployed in the present invention.

Therefore, as can be seen, various embodiments of the present invention provide the unexpected and unpredictable benefits of simplifying the course of learning music by deploying the process of sight-reading. The system of colored keys and music notation for keyboard-based instruments having a multiple of octaves improve the sight-reading of one or more students who are learning to play music on one or more keyboard-based instruments. The one or more octaves of the multiple of octaves and a set of instructions including one or more music notations corresponding to the one or more octaves of the multiple of octaves are colored, which further facilitate the student to become skilled at playing the music notations on one or more keyboard-based instruments in minimum time frame. Subsequently, the one or more colored octaves make the sight-reading process more intuitive and user-friendly, by indicating the relative location of the each note to be played, and by narrowing down the selection of possible keys to just twelve keys, or even less if the one or more octaves are further divided into groups of the lighter variation or the darker variation of the one or more colors. Furthermore, the present invention makes a marked departure from the conventional approach employed in the prior art of leaving the student to his own resources, to painfully master the art of sight-reading over years of repetitive and boring practice. As the student initiate playing

the one or more keyboard-based instruments, his fingers respond instinctively to the color cues of the present invention and automatically moves to the appropriate octave where the note to be played is located. Consequently, his hand is already comfortably in position to play the musical notes, all the student has to now do is figure out exactly which note has to played from a much narrower selection of about seven white keys within the octave, i.e., C, D, E, F, G, A or B, and their associated sharps and flats. Furthermore, in the musical score employed in the present invention even the accidental notes are colored with the color of the natural note to which they are related, subsequently helping the student to identify them without any difficulty while retaining cognition of the relation between the accidental and its natural note. Furthermore, the present invention eliminates the inherent struggle in getting one's exact bearing on the keyboard, especially during fast passages that extend over many octaves. At the same time, it does not spoon feed the student but encourages him to calculate and think for himself, thus helping him to develop a sense of pitch, which is vital to musicians. As a result, the present invention recognizes the need to guide the student through the process of sight-reading, without hampering his or her musical growth in the process.

In the foregoing specification, specific embodiments of the present invention have been described. However, one of ordinary skill in the art will appreciate that various modifications and changes can be made without departing from the spirit and scope of the present invention as set forth in the various embodiments discussed above and the claims that follow. Accordingly, the specification and figures are to be regarded in an illustrative rather than a restrictive sense, and all such modifications are intended to be included within the scope of present invention. The benefits, advantages, solutions to problems, and any element(s) that may cause any benefit, advantage, or solution to occur or become more pronounced are not to be construed as a critical, required, or essential features or elements as described herein.

Claims

I claim:

1. A system of colored keys and music notation for keyboard-based instruments comprising:

   a keyboard-based instrument having a plurality of octaves wherein at least one octave of said plurality of octaves is colored; and

   a set of instructions comprising at least one music notation corresponding to said at least one octave of said plurality of octaves.

2. The system of claim 1, wherein said at least one octave of said plurality of octaves of said keyboard-based instrument is colored with at least one color.

3. The system of claim 1, wherein said at least one octave of said plurality of octaves of said keyboard-based instrument is colored with at least one lighter variation and / or at least one darker variation of said at least one color.

4. The system of claim 1, wherein at least one white key of said keyboard-based instrument is colored with said at least one lighter variation and / or said at least one darker variation of said at least one color.

5. The system of claim 1, wherein at least one black key of said keyboard-based instrument is colored with said at least one lighter variation and / or said at least one darker variation of said at least one color.

6. The system of claim 1, wherein said at least one white key, and / or said at least one black key of said plurality of keys of said keyboard-based instrument are colored either by dyeing at a time of manufacture, or by application of a paint on said at least one white key, and / or said at least one black key of said plurality of keys, or by deploying a plurality of colored adhesive stickers, or by placing colored overlays on said at least one white key, and / or said at least one black key of said plurality of keys, or by fixing a plurality of colored

lighting or a plurality of LEDs (Light Emitting Diodes) on near and/or within said at least one white key, and / or said at least one black key of said plurality of keys, or by projection of a plurality of colored lights by mounting onto said keyboard-based instrument, or in a form of a virtual instrument projected with a plurality of colored lights and the like that serves the purpose of coloring said at least one octave of said plurality of octaves.

7. The system of claim 1, wherein said at least one white key, and / or said at least one black key of said plurality of keys of said keyboard-based instrument are assigned a sequence of at least two rainbow colors of said at least one color to said at least one octave of said plurality of octaves in succession, starting from a lowest octave to a highest octave of at least one octave of said plurality of octaves.

8. The system of claim 7, wherein said sequence of at least two rainbow colors of said at least one color are repeated from a eight octave of said at least one octave of said plurality of octaves.

9. The system of claim 1, wherein said set of instructions comprises a musical score having a plurality of notes, wherein each note of said plurality of notes is colored with said at least one colour and / or at least one lighter variation and / or said at least one darker variation of said at least one color corresponding to said at least one white key and / or said at least one black key of said plurality of keys of said keyboard-based instrument.

10. The system of claim 8, wherein each accidental note of said plurality of notes are colored with an identical color, or with an identical color of said at least one lighter variation and / or said at least one darker variation of said at least one color of at least one natural note of said plurality of notes to which said each accidental note of said plurality of notes are related on said musical score.

11. The system of claim 8, wherein a plurality of accidental symbols are colored with the identical color, or with said identical color of said at least one lighter variation and / or said at least one darker variation of said at least one color of said each accidental note of said plurality of notes on said musical score.

12. The system of claim 1, wherein said at least one music notation is in the form of a printed score, a computer program product embodied on a tangible computer readable medium for operating a computer to play said music notation, a game console, an electronic device, a video and the like deployed for color coding of said each octave of said plurality of octaves of said keyboard-based instrument.

13. The system of claim 1, wherein said at least one music notation is assigned said sequence of at least two rainbow colors of said at least one color to said at least one octave of said plurality of octaves in succession, starting from said lowest octave to said highest octave of at least one octave of said plurality of octaves.

14. The system of claim 13, wherein said sequence of at least two rainbow colors of said at least one color are repeated from a eight octave of said at least one octave of said plurality of octaves.

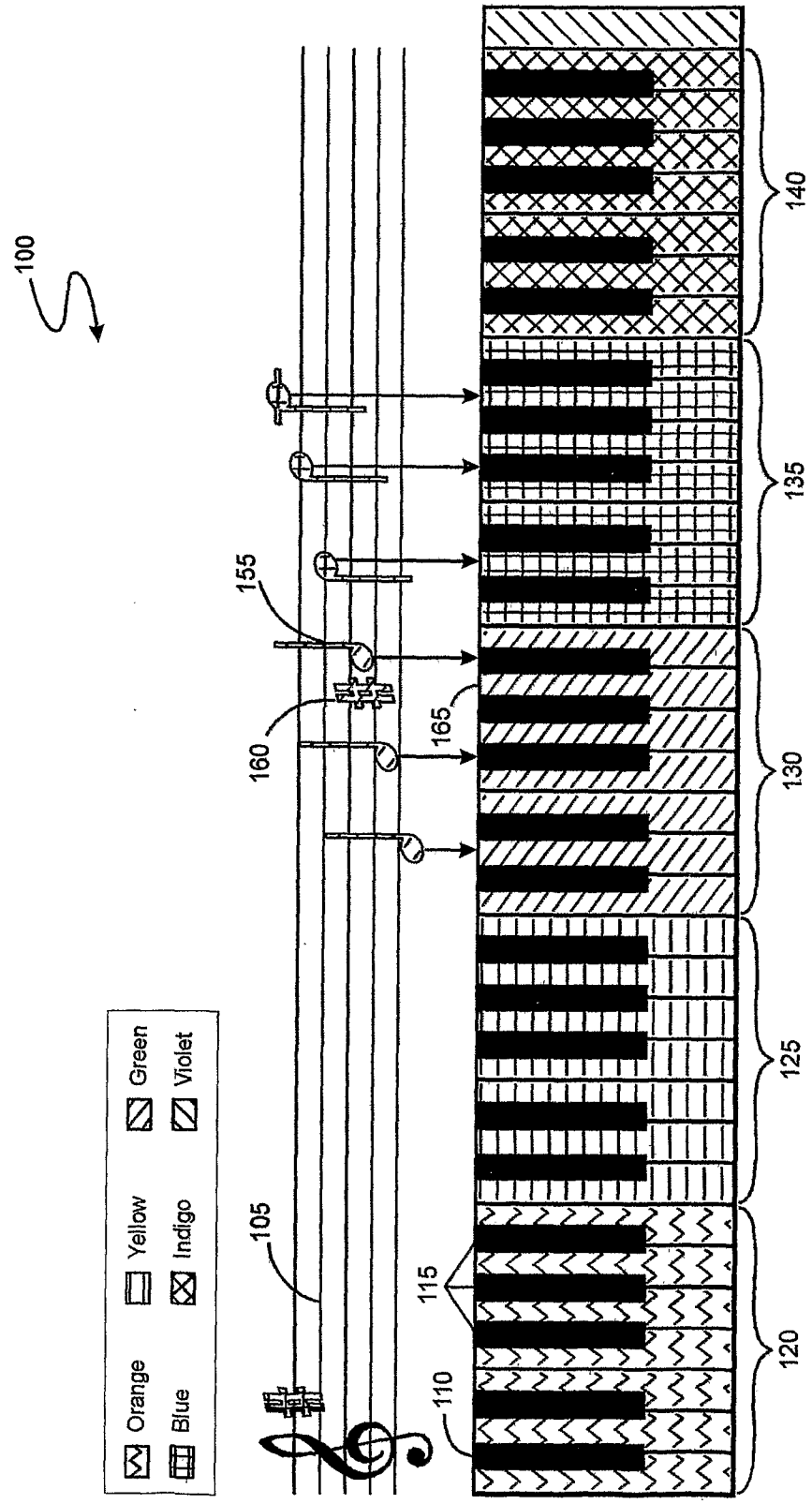
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FIG. 1

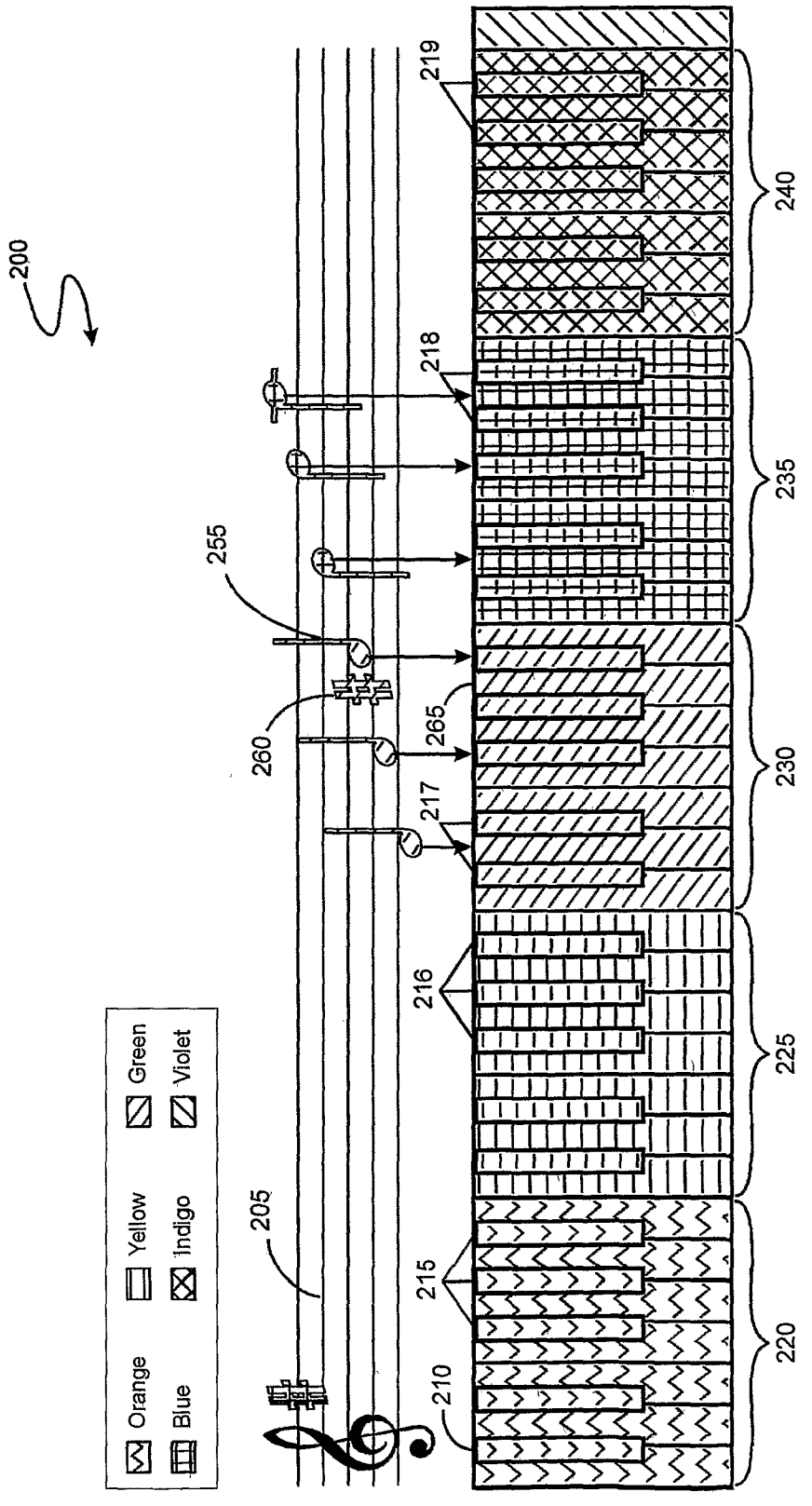
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FIG. 2

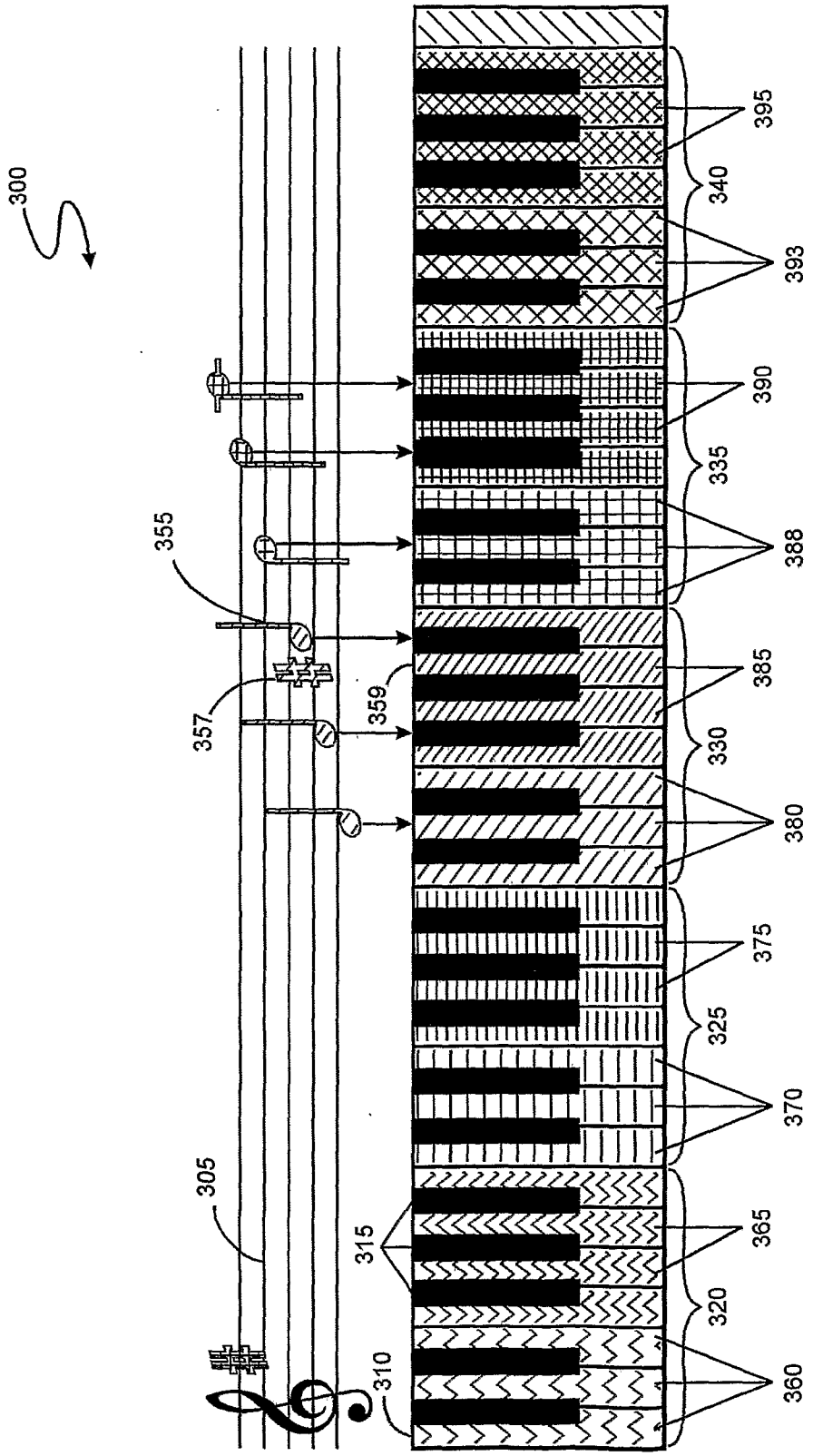
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FIG. 3

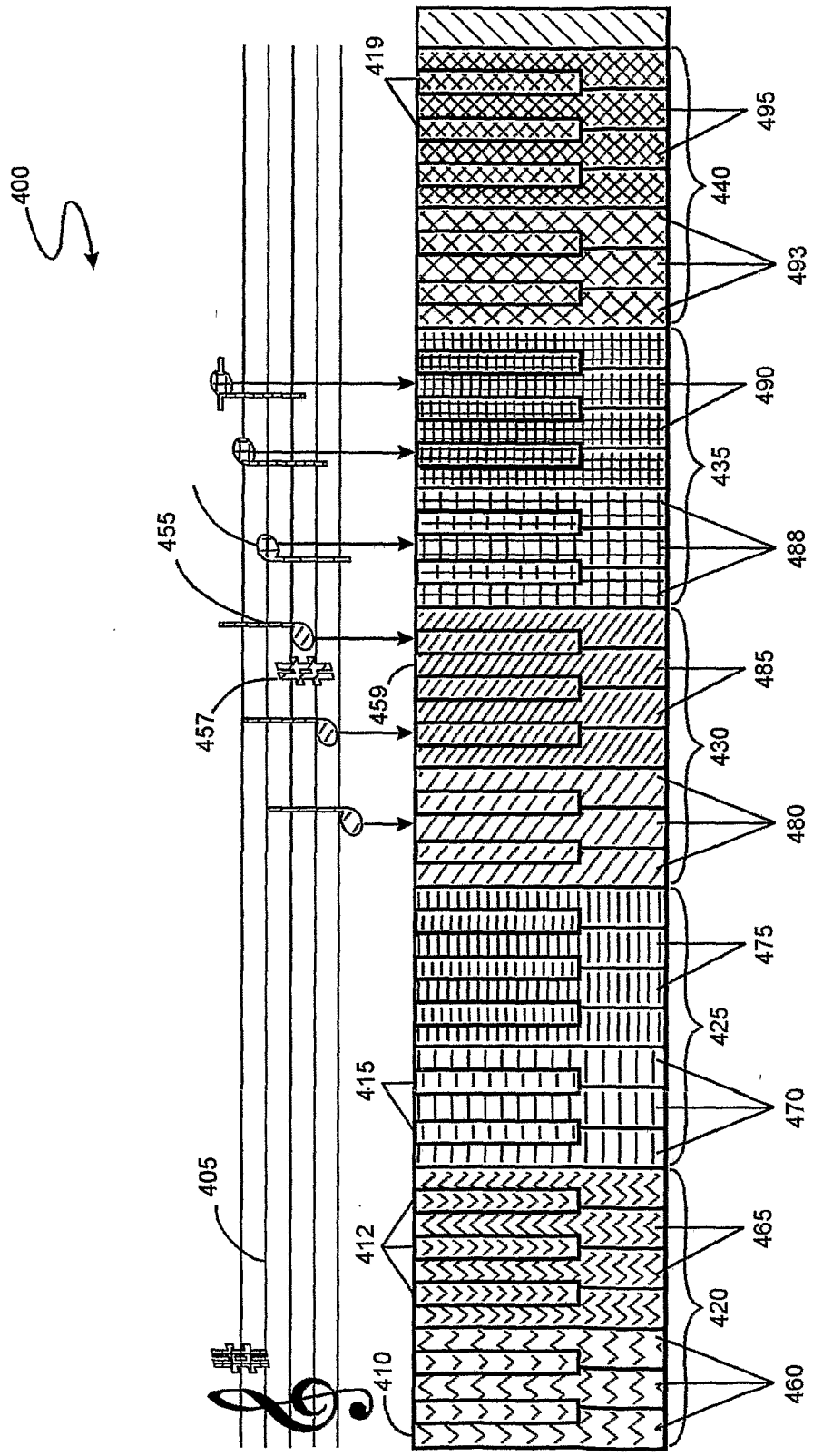
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FIG. 4

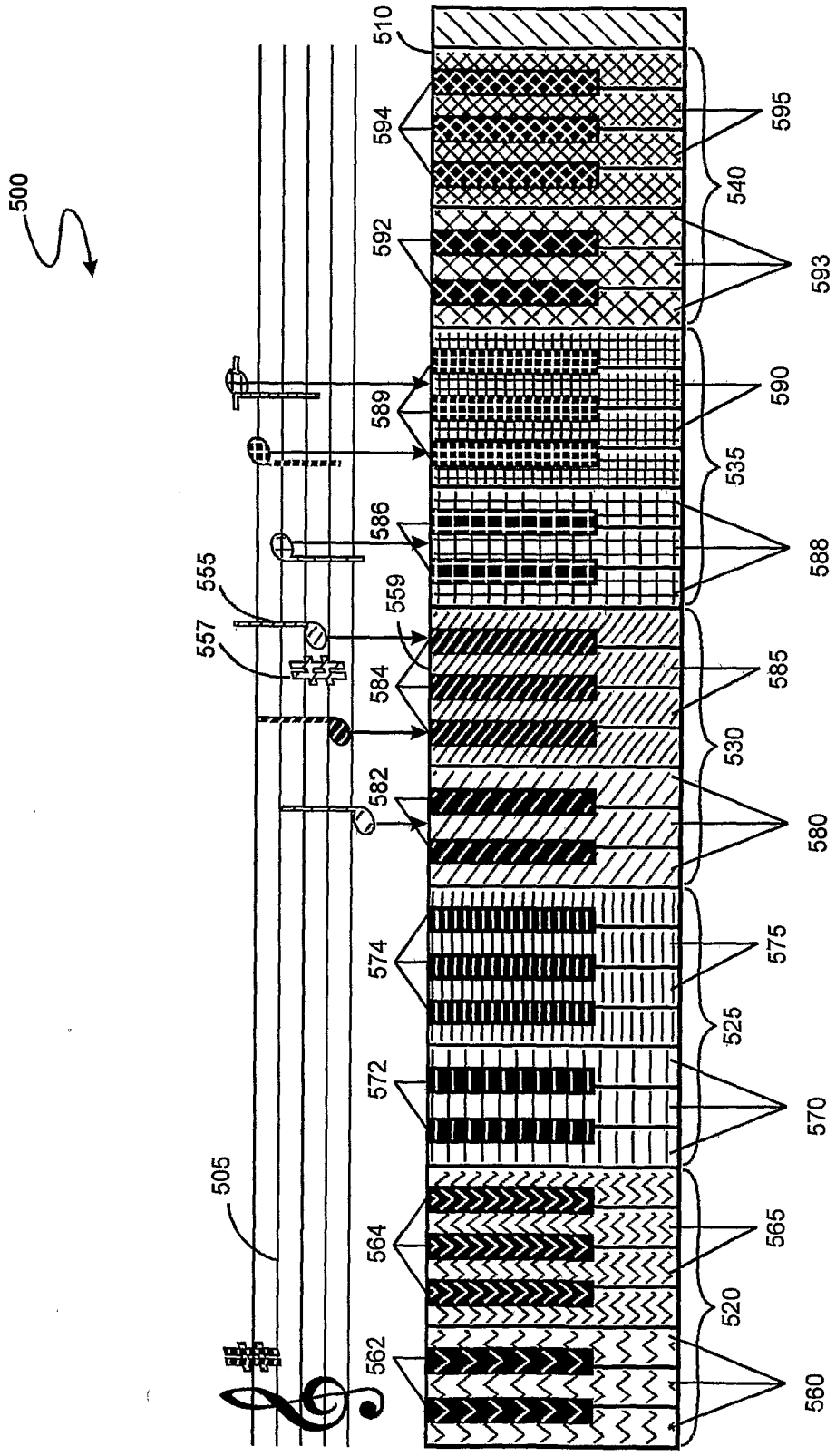
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FIG. 5