Fundamentals Track

Keyboard Percussion

by Eric Chandler and Chris Norton

INTRODUCTION

The standard keyboard percussion family of instruments includes the marimba, xylophone, vibraphone, orchestra bells (glockenspiel), and chimes (tubular bells). These instruments share a commonality, namely their similarity of design to a piano keyboard. The first two fundamental areas with which a beginner deals are technique—posture, body movement, grip, stroke, playing area—and visual pitch recognition—the ability to "read" music. This handout gives some cursory information regarding these fundamental areas.

FUNDAMENTAL TECHNICAL CHECKLIST

(The following technical tips are widely practiced but certainly may differ from other valid approaches used by some teachers and performers. When trying any technical approach to an instrument, one should consider whether the outcome will enhance or inhibit facility and/or sound production.)

Height: When possible, adjust the instrument to appropriate height where your forearms are a little less than perpendicular to the instrument keyboard.

Body Movement: Strive for consistency of upper body position to region of notes played; thus, body movement should be in a side stepping fashion, or by keeping feet planted and lunging sideways from knees. Also, avoid standing too close to the instrument since poor mallet placement and stroke may occur.

Grip: The two-mallet grip is essentially similar to the matched snare drum grip. Place palms parallel to floor, grip mallet with thumb and first two fingers, let third and fourth fingers curl lightly around shaft. The base of the shaft should come out the "fat" of the hand, avoiding the extremes of the knuckles or the center of the wrist. Check fulcrum (balance point) so that the weight of shaft and mallet head yield a full tone while avoiding "heaviness" or lack of facility; generally this fulcum is between the thumb and forefinger about 5/8 down the shaft from the mallet head.

The two primary types of four-mallet grips are the cross grip and the independent grip. Of the cross-grips, the Traditional and Burton grips are the most popular. The Musser and Stevens grips are the most widely used independent style grips (see illustrations later in this handout).

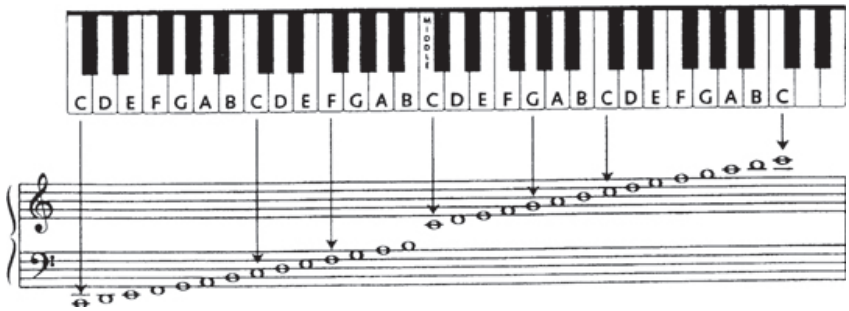
Stroke: With the wrists at the level of the keyboard, a full stroke consists of beginning with the wrist cocked up, striking the bar, and then immediately returning to the starting point— all in one motion. As with all percussion instruments, it is helpful to conceive of drawing the sound out of the instrument rather than hitting into it.

Playing area: Playing all bars just slightly off center produces the strongest fundamental pitch and provides consistency of sound between manuals.

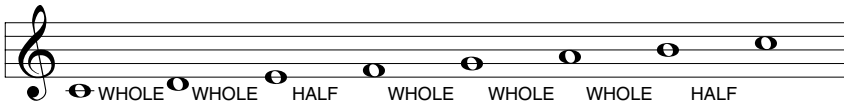
FUNDAMENTALS OF READING PITCHED MUSIC

1. **Staff and Corresponding Keyboard Placement:** Pitches on a grand staff (with bass and treble clef) and their corresponding position on the piano keyboard is given at right. The black keys on the piano correspond with the upper manual of keyboard percussion instruments.
2. **Steps/Scales:** Traditional scales are collections of pitches with consecutive letter names. A half-step occurs between a given bar and its closest neighbor (fully incorporating upper and lower manuals). A whole-step equals two half-steps. An ascending major scale consists of the following arrangement of whole (W) and half (H) steps: W, W, H, W, W, W, H.
3. **Accidentals/Key Signatures:** A sharp (#) in front of a note raises it one-half step. Conversely, a flat (♭) lowers the pitch a half-step. When an accidental is placed in the key signature at the beginning of the piece, it controls all pitches on that line or space (and octave equivalents) within the piece. A natural sign, then, cancels out this global accidental from the key signature—but just for the measure in which the accidental occurs.

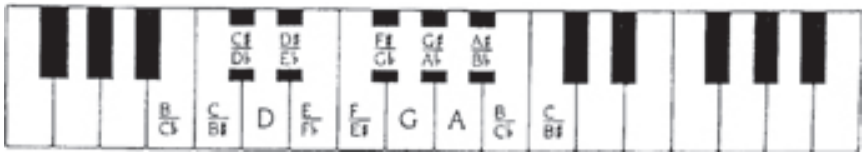
The Grand Staff and the Keyboard



C Major Scale in Treble Clef

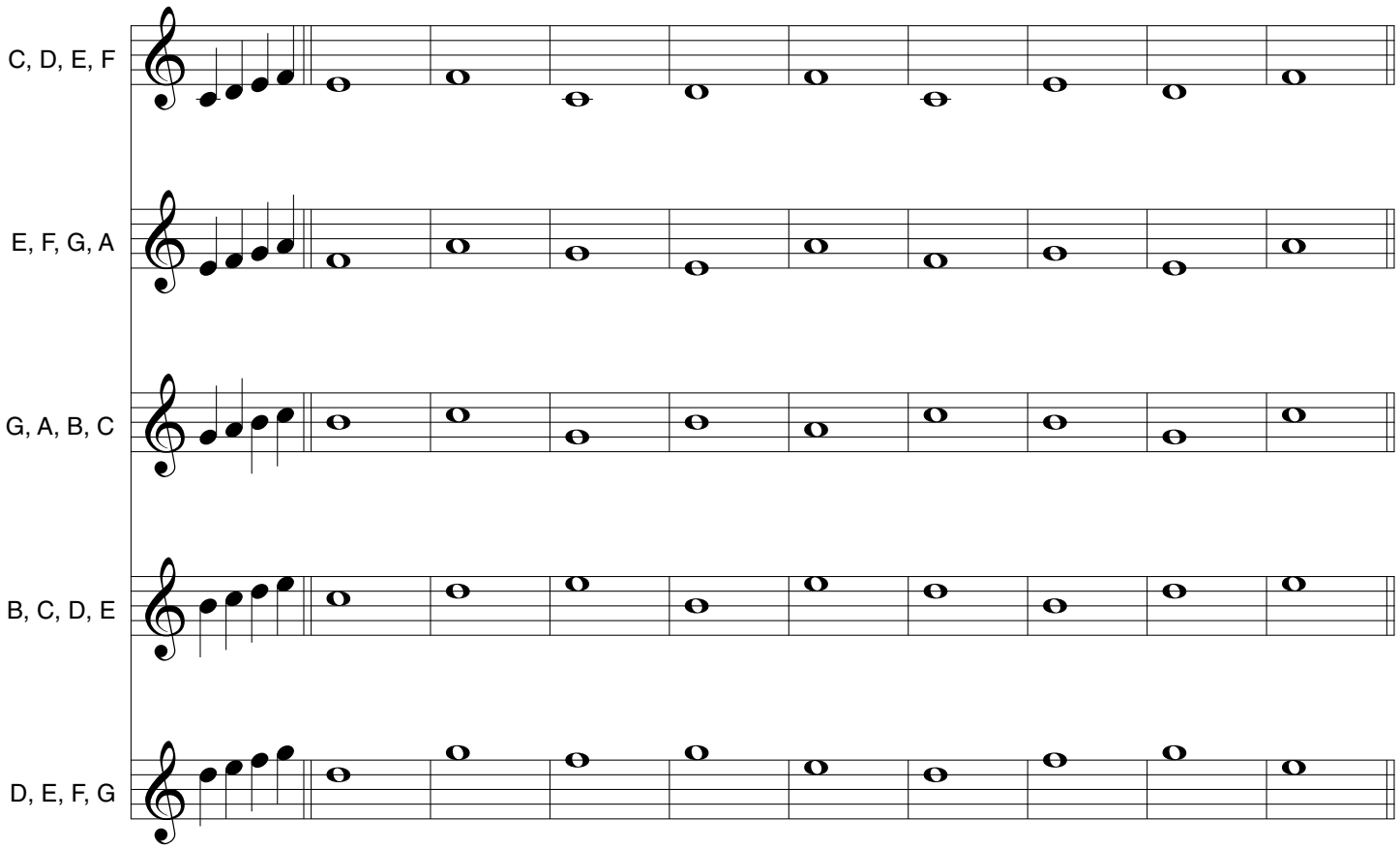


Accidentals and the Keyboard



4. **Pitch Recognition:** Learning and memorizing new information often requires extensive repetition of a small amount of material in order to acquire familiarity. Thus, for a beginner to learn how to "read" pitches fully and expediently, drilling on a restricted range of pitches is recommended. When all pitches within a restricted set are instantly identifiable—that is, "learned" rather than "figured out"—then a new overlapping set is introduced. A worksheet employing this method for treble clef pitches is given below.

Pitch Recognition Exercises in Restricted Range Sets



FUNDAMENTAL TECHNICAL EXERCISES

The following exercises will begin to develop some technical facility on the percussion keyboard instruments. All examples are in C Major; with the assistance of a teacher and/or method book, the student can learn to apply these patterns to other keys. (Note: rolls on keyboard percussion instruments are single-stroke rolls—a rapid succession of alternating strokes.)

1. Five-note set
2. Nine-note set
3. Arpeggiated triad
4. Broken thirds
5. Dyadic thirds
6. Chromatic scale
7. Turn-around
8. Oblique motion
9 Step and roll
10. Leap and roll

PRACTICE SUGGESTIONS

The old adage "practice makes perfect" is fundamentally true. An educator's expanded version of this phrase reads "consistent, concentrated, correct practice contributes significantly towards improvement." Here are a few tips:

- Plot your day and week; it's wise to look at your week and determine when and how you can maintain a regular practice routine.
- Have a plan for your practice period; an example for a forty- minute session might be to do technical exercises for 10 minutes, solo music for 15 minutes, ensemble music for 10 minutes, and sight reading for 5 minutes.
- Choose a time and space that is free from distraction and full of concentration.
- Avoid just playing through pieces; real practice occurs when you focus on difficult parts, isolate them, slow them down, create fun exercises which develop the necessary technique, and then put them back into their context.
- Develop your kinesthetic/spatial skills by keeping your eyes on the printed music; refrain from memorizing everything or repeatedly looking down at the instrument.

RECOMMENDED FUNDAMENTAL KEYBOARD PERCUSSION METHOD BOOKS

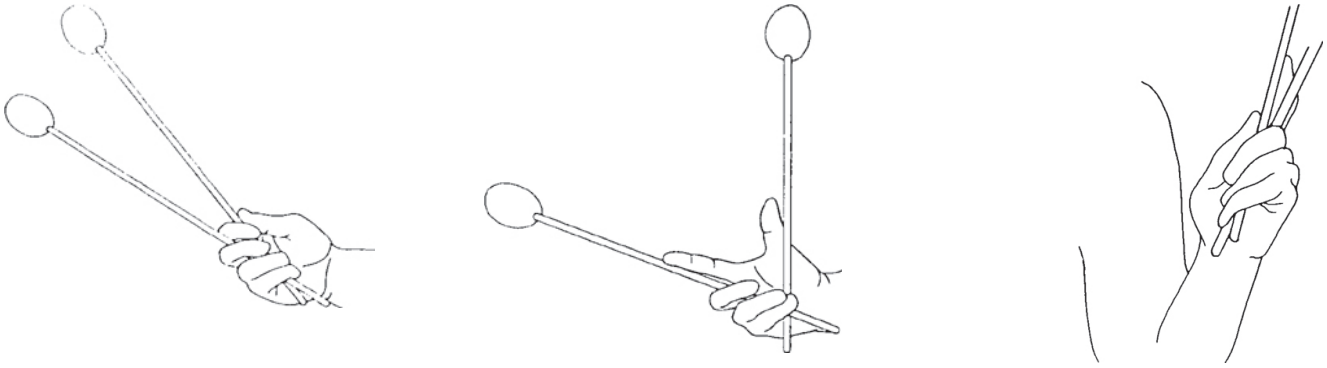
* *The Complete Percussionist* by Robert Breithaupt (Barnhouse)
* *Teaching Percussion* by Gary D. Cook (Schirmer)
Modern School for Xylophone, Vibraphone, and Marimba by Morris Goldenberg (Chappell)
An Instruction Course for Xylophone by George Hamilton Green (Meredith)
Music Speed Reading, Junior Version by David Hickman (Wimbledon)
78 Solos for Marimba by Art Jollif (Belwin Mills)
Fundamental Method for Mallets by Mitchell Peters (Alfred)
Fundamental Studies for Mallets by Garwood Whaley (JR Publications)
Primary Handbook for Mallets by Garwood Whaley (Meredith)
And beginning piano, flute, and violin books!

*denotes reference book

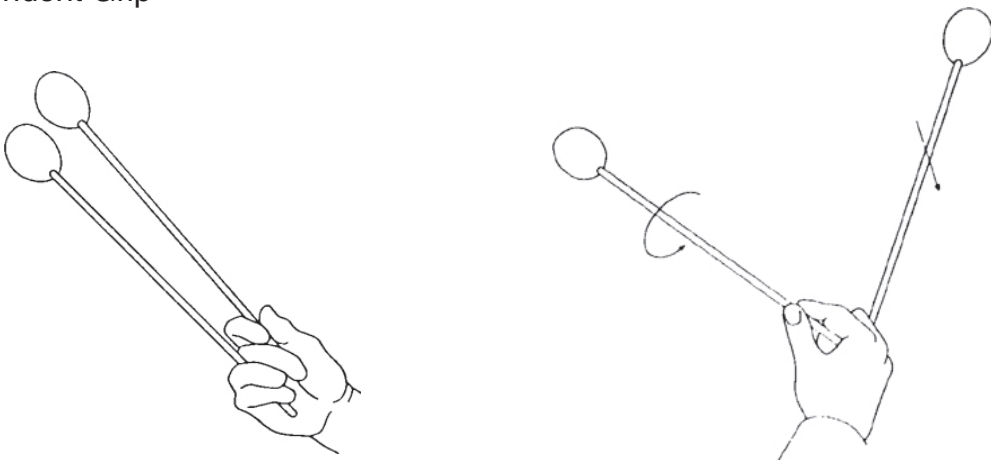
ILLUSTRATIONS OF FOUR-MALLET GRIPS

(Illustrations reprinted from *The Complete Percussionist* by Robert Breithaupt with publisher's permission.)

The Cross Grip



The Independent Grip



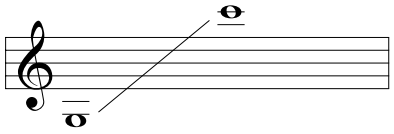
KEYBOARD PERCUSSION INSTRUMENT PICTURES, RANGES, TRANSPOSITIONS, AND MALLET SELECTION

(Pictures reprinted from *Teaching Percussion* by Gary D. Cook with publisher's permission.)

(Orchestra) Bells or Glockenspiel

- **Range:** 2 1/2 octaves
- **Transposition:** sounds two octaves higher than written pitch
- **Material:** steel bars (sometimes aluminum)
- **Mallets:** brass, lexan, polyball, hard rubber

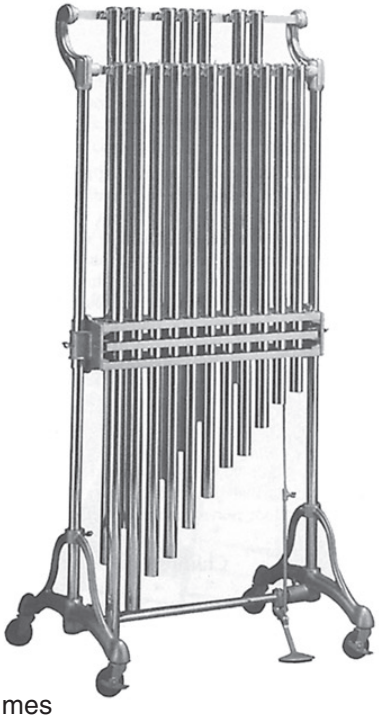
Bells



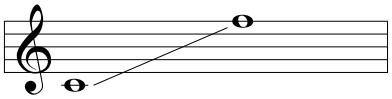
Bells Range (written pitch)

Chimes or Tubular Bells

- Range: 1 1/2 octaves
- Transposition: non-transposing (sounds at written pitch)
- Material: steel tubes; damper pedal
- Mallets: rawhide or acrylic hammer



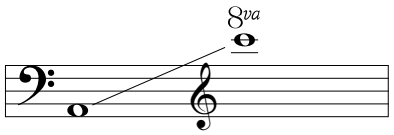
Chimes



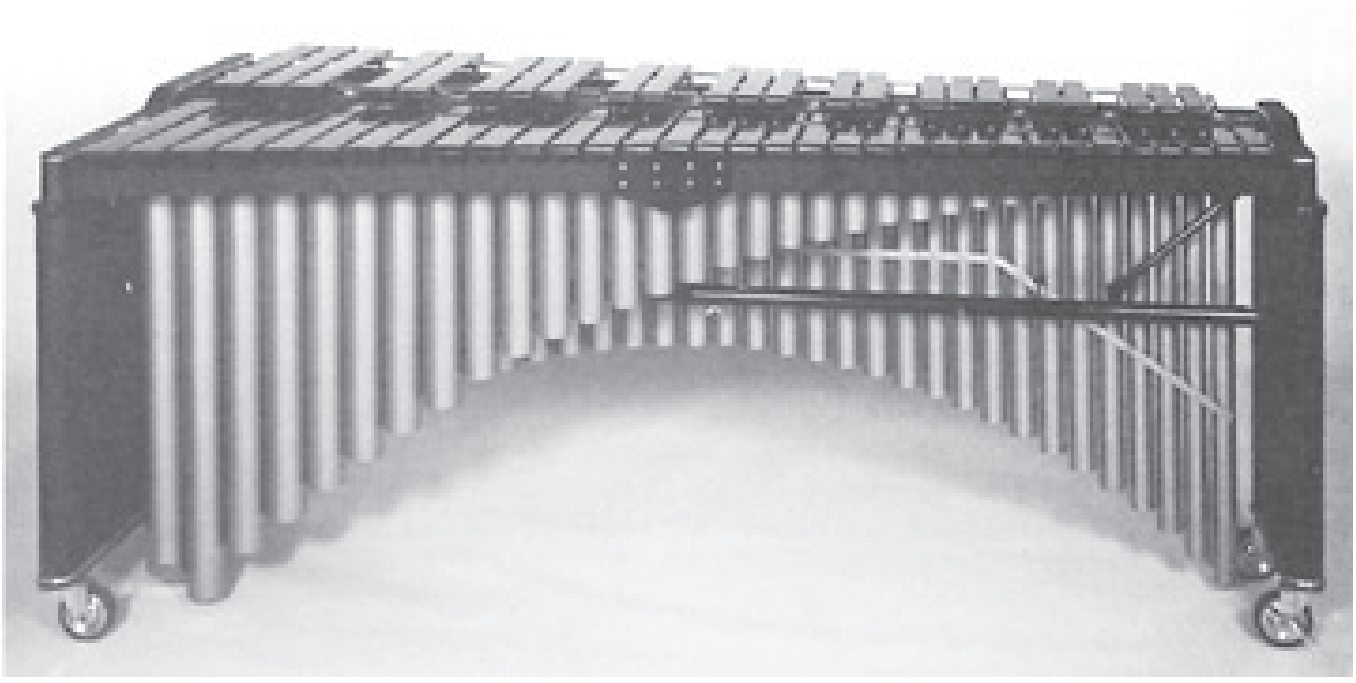
Chimes Range (written pitch)

Marimba

- **Range:** 4 1/3 octaves is common; also 3 1/2, 4, 4 1/2, and 5 octave models
- **Transposition:** non-transposing (sounds at written pitch)
- **Material:** rosewood or synthetic bars
- **Mallets:** yarn, cord, soft to medium rubber



4 1/3-Octave Marimba Range (written pitch)

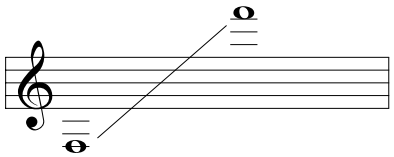


Marimba

Vibraphone

- **Range:** 3 octaves
- **Transposition:** non-transposing (sounds at written pitch)
- **Material:** metal aluminum bars; dampening pedal; motor driven oscillating flaps in resonators create a vibrato effect
- **Mallets:** cord

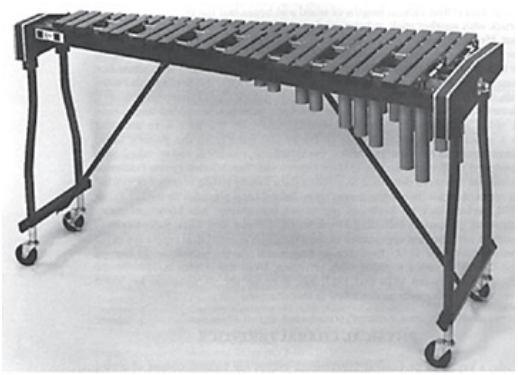
Vibraphone



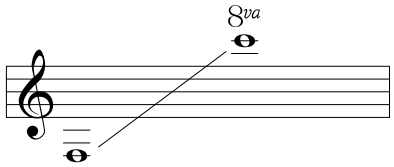
Vibraphone Range (written pitch)

Xylophone

- **Range:** 3 1/2 octaves
- **Transposition:** sounds one octave higher than written pitch
- **Material:** rosewood or synthetic bars
- **Mallets:** lexan, polyball, hard rubber



Xylophone



Xylophone Range (written pitch)