

TERMINOLOGY

Extended techniques: Playing an instrument in unconventional ways to temporarily achieve different timbres. On piano, this can involve playing parts of the instrument other than the keys, altering the sound of the strings while playing the keys, or playing on the keys in unconventional ways, adding vocalizations. All alterations are momentary; the piano can immediately be used again for other repertoire.

Prepared piano: Placing foreign objects inside the piano to alter the sound for the duration of a piece; piano must usually be unprepared before other pieces can be played on it.

Piano Anatomy: Keys, cheekblocks, keybed, fallboard, music stand (or desk)
 Pedals, from R to L: Damper (ped. I or sustain), Sostenuto (ped. II), Una corda (ped. III). Not all pianos have Sostenuto pedal
 Strings (copper wound and steel, sounding and non-sounding lengths), agraffes, tuning pins, dampers, action
 Harp, beams, case, soundboard, short stick, long stick, lid

Inside of piano varies wildly by make and model – beam placement, damper position, number of strings, copper/steel split. For maps of common makes, see Laurie Hudicek’s DMA dissertation *Off key: A comprehensive guide to unconventional piano techniques* (University of Maryland, 2002).

▼ SAFETY ▼

Dampers Strings

- Felts and damper wires are extremely delicate, easily mashed or bent, and cannot be fixed, only replaced
- Vulnerable to corrosion, bending, or breakage; copper winding on bass strings can loosen and rattle

General

- Treat a concert grand with the same level of care you’d treat a Ferrari or a unicorn. If you hurt it, generations will suffer.
- Wash and dry hands thoroughly before touching strings, to keep them oil free. No hand cream!
- Stay away from the dampers! Take great care when you must play near them
- Dampers must be up for most extended techniques to sound – need string resonance
- Avoid striking strings with objects as hard or harder than the string itself (Google it). Softer metal (tin, aluminum, copper) may be used on upper strings. Never use metal on the lower strings, never use anything that will leave a residue.
- Avoid scraping along copper wound strings with anything harder than a fingernail
- Limit practice sessions to relatively brief intervals (30 min.) to avoid overuse injuries. If entire piece has damper pedal depressed, consider a wedge (clothespin or folded paper) underneath the back of the pedal.
- Book extra rehearsal time for set-up and troubleshooting

Setting up:

- Identify pitches by marking them with Post-it flags – no glue residue, easily removed. If writing on flags, do it *before* placing them in the piano. You can mark only the pitches used, or mark all black notes, colour coding by octave.
- If possible mark pitches at agraffes (end of string closest to the pianist)
- If marking dampers or placing items between strings, always lift dampers first (by pedal or key) pedal first
- Never put stickers, masking tape, grease pencil, nail polish, white-out, chalk or rusty objects on strings – or anything else that may leave residue, react with strings, cause harm when removed, or get inside bass string winding. Not sure? Google it.
- Harmonics can be marked with surgical paper tape, which is low residue. (NOT cloth surgical tape). Post-its just fall off.
- Conventional placement of music stand often limits access to the inside the piano. Suggest lifting out and lying on frame or raised onto books or blocks to reach underneath, or laying the music desk flat, or removing it altogether to reach over it.
- Desk can also be placed further back on the crossbeams, taking care not to knock the dampers. For practice, it can often be placed on top of closed lid.

PIANO EXTENDED TECHNIQUES

Pizzicato



- Plucked strings with fingertip (ft) or fingernail (fn)
- Brace hand against frame or strings with thumb or non-playing finger to improve control and accuracy
- Pluck towards strings of the same note when possible to avoid plucking other pitches
- Touch the string first, and start plucking motion directly from the string, unless repeating the pitch
- For repeated pitches, pluck a different string of the same pitch; start close to string without touching to avoid damping pitch

Muting



- Apply firm pressure close to end of string, taking care to cover all strings for that pitch
- Hold pressure until you feel the initial vibration stop, to keep consistent muting for full duration of note
- Be aware of variable beam placement if muting a range of notes

Harmonics



- place finger on node, play key or pizz with other hand
- Indicate which node with a number and concert pitch
- Memorize node location relative to dampers, or printing on soundboard; avoid marking node if possible
- Nodes not always available due to beams, damper or cross-stringing – suggest alternates, and always notate the concert pitch as well as the key/string to play so it's less disorienting if pianist has to use an alternate

Overtones



- Silently depress key(s) and hold with finger or sostenuto pedal, play other keys
- Depress silent keys only partway to avoid having the notes sound, no need to go past the escapement
- Percussive, fast attack on the notes played aloud creates best sympathetic vibrations
- Be aware that a single silent note may or may not sound, depending on the piano – suggest alternates

Clusters



- Start from the key to ensure accuracy and avoid injury, especially for chromatic clusters
- For hand clusters, experiment to find the best angle for that particular cluster
- Follow through with flexible arm and wrist to achieve ringing tone; use a short abrupt action, stopping arm at key bed for more percussive tone
- Listen for balance and togetherness; as with any chord, these can be adjusted with arm angle and rotation

Palm strikes



- Also called palm clusters. Strike string with flat of palm(s)
- Indicate range (low, middle, high) rather than specific pitches. High range may require pianist to stand, so leave time.

Percussive Techniques and other use of external objects



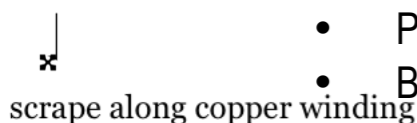
- Place a small cloth or towel on the frame to hold any objects like mallets, to keep them from making noise
- When striking strings, begin stroke close to strings to avoid accidentally hitting dampers; rebound off strings immediately

String Glissandi



- Fingertip (ft) or fingernail (fn)
- Use minimal pressure for glissandi across strings; use speed, not pressure for louder dynamics
- Can silently depress keys to make chords
- Be aware of variable beam placements – suggest alternates

String Scrapes



- Copper wound strings, Fingertip (ft) or fingernail (fn), towards ↓ or away ↑ from pianist
- Place finger between two strings of the same pitch or use adjacent string to guide hand
- Be aware of variable string numbers or winding – suggest alternates

Vocalizations

- Spoken word will usually require amplification for words to be intelligible; headset mic recommended, consider balance
- If words are at same time as active playing, notated rhythms for words are easier than leaving rhythm un-notated

Notation

- Avoid inventing new notations for commonly used techniques
- Provide a preface, clearly describing any extended techniques and showing the notation you're using
- Provide a map in the preface showing everything that will need to be marked inside the piano

Considerations

- Allow extra time to play inside the piano, or pick up and put down implements
- Techniques reaching multiple pitches simultaneously inside piano, or harmonics may not be accessible on all pianos
- Techniques inside the piano sounds louder to pianist than to audience. Consider writing louder dynamics to compensate.

Cleaning up

- Leave no trace – remove everything from the piano that you placed inside
- If you drop anything into the action, most fallboards lift out easily – undo screws on sides if present, grasp fallboard firmly at sides and pull; if item is not easily removed, contact technician immediately
- Use the same care removing markers and other items as you did to place them

SUGGESTED LISTENING

- Henry Cowell *The Tides of Manaunaun* (1912) – clusters; *Aeolian Harp* (c1923) – silently held chords, glissandi across strings; *The Banshee* (1925) – glissandi along copper wound bass strings; *Sinister Resonance* (1930) – overtones
- John Cage *Sonatas and Interludes* (1946-1948) – for prepared piano
- George Crumb *Makrokosmos*, Vol. 1 (1974), Vol. 2 (1973)
- Nikolai Korndorf *Yarilo* (1981) – for prepared piano
- Lisa Cay Miller *Colour Codes* (2010)
- Frederic Rzewski *De Profundis* (1992) – spoken word, percussion; *Winnsboro Cotton Mill Blues* (1980) – forearm clusters
- Gilles Tremblay *TRAÇANTES auprès, au loin...* (1976) – overtones
- Hildegard Westerkamp *Like a Memory for piano and tape* (2000), *Klavierklang* (2017) – percussion on piano and other objects, theatrical elements