

Piano Playing Docs | Methods

[Draft]

JJ van Zon, 2021

Piano Motion Symbols

Introduction

This is an idea for a notation for that might extend fingering notation from just numbers to additional symbols, indicating how the hands and body might move.

I hope this might help create awareness of the body and help with piano technique.

Piano playing may involve:

- position, move, spread, turn, press, stress or hold stationary
- fingers, wrist, arm and torso
- in x, y or z directions.

Not all body parts or motions seem equally involved.

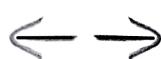
These symbols aim to be a quite literal representation of body and motion, while still schematic and hopefully not ambiguous.

Basic Elements

	Finger		Move		Press
	Fingers		Spread		Loose
	Wrist		Turn		Tight
	Torso / arms		Stationary		Slightly (braces)

Three Dimensions

Depicting things in 3 dimensions, the symbols may be like looking down at the hands in a sort of perspective projection. To represent depth, diagonal lines might be used. Here is how some things might work in 3 dimensions:



Move left / right



Turn right & left / looking down



Move forward / backward



Turn forward / backward



Move down



Turn right & left / looking forward



Move up

Up / Down With Curled Lines

Diagonal directions seem to matter for arm positions. In that case diagonal lines might not be available for up/down directions. Instead bent lines might be used for up and down. It may represent the curve, that the arm appears to have in those positions.



Up = curled out



Down = curled in



Small curl = 1D direction (up / down)



1/2 curl = 2D diagonal (forward-up)



1/4 curl = 3D diagonal (forward-up-out)

Turning

Turn right
(looking down)



Turn left
(looking down)



Turn right
(looking forward)



Turn left
(looking forward)



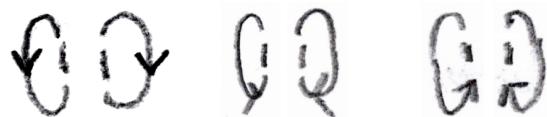
Turn left / right
(looking forward)



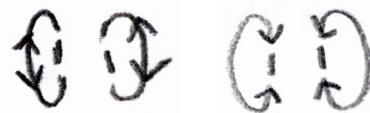
Turn forward



Turn backward



Turn forward / backward



The dashed line may depict it being further away.

Turning Arc



Nuance

Nuance, like press *a little* or move *a lot*, may be written down like this:

	Restfully	Slightly	Normally	Exaggerated
Press	↖	(↖)	↖	↖
Move	↖	(↖)	↖	↖
Tight Wrist	⟩↖↖<	(⟩↖↖<)	⟩↖↖><	⟩↖↖><
Loose Wrist	'↖'	('↖')	'↖'	"↖"

Tension & Release

→	Reach sideways	Then let go, move hand back.
↖	Reach sideways	Then let go, move hand back.
↖ ↗	Spread	Spreading fingers wider. But trying to release soon.
↑	Reach forward	If arpeggiated, might prefer crossing over instead.

	Reach backward	If arpeggiated, might prefer crossing over instead.
	Spread diagonally	Composite of spread sideways and reach forward.
	Arm press down	Pressure coming out of the arm.
	Hand resting on keys	
	Hand resting on lap	

Jumps

	Hand upward (right view)	
	Hand upward (left view)	
	Gravity assist (right view)	Falling down with gravity.
	Gravity assist (left view)	Falling down with gravity.
	Bowy jump (sideways)	
	Controlled jump (sideways)	Though grace might desire a bowy move, a jump may be rather big, and might need some control, so perhaps move toward first, then press.

Cross Over

May feel semi-smooth.

	Cross over (large)		Thumb under finger / right hand		With wrist turn (thumb under finger / right hand)
	Cross over (small)		Finger over thumb / right hand		With wrist turn (finger over thumb / right hand)
			Thumb under finger / left hand		With wrist turn (thumb under finger / left hand)
			Finger over thumb / left hand		With wrist turn (finger over thumb / left hand)

Fingers

Finger Position

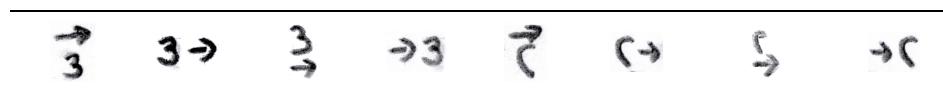
	Curved / High Fingers	Pronounced Fingers	Flat Fingers (Upward)	Flat Fingers (Downward)
1 Finger (Left)	↙	↖	↘	↗
1 Finger (Right)	↗	↖	↙	↘
2 Fingers	○	▽	▽	△
3 Fingers	△	▽▽	▽	△
4 Fingers	△△	▽▽▽	▽▽	△△
5 Fingers	△△△	▽▽▽▽	▽▽▽	△△△

Fingers Stationary

	Curved / High	Pronounced	Flat	Number
Fingers Stationary (left / right / 1 finger)	17/	17/	17/	141
Fingers Stationary (left / right / 3 fingers)	1m/	1m/	1m/	
Fingers Stationary (up / down / 1 finger)	1	1	1	4
Fingers Stationary (up / down / 3 fingers)	13	13	13	
Fingers Stationary (forward / backward / 1 finger)	1	1	1	4
Fingers Stationary (forward / backward / 3 fingers)	13	13	13	

Finger Move

Finger move (right)



 $\rightarrow \overrightarrow{m} \leftarrow \overleftarrow{m} \rightarrow m \leftarrow \overleftarrow{m} \rightarrow \overrightarrow{m} \leftarrow m \rightarrow \overrightarrow{m}$

Finger move (left)

 $\begin{matrix} \overleftarrow{3} & 3\leftarrow & \overleftarrow{3} & \leftarrow 3 & \overleftarrow{r} & r\leftarrow & \overleftarrow{l} & \leftarrow l \end{matrix}$

 $\leftarrow \overleftarrow{m} \leftarrow \overrightarrow{3} \leftarrow m \leftarrow \overleftarrow{3} \leftarrow \overrightarrow{m} \leftarrow m \leftarrow \overleftarrow{3}$

Finger move (right / left)

 $\begin{matrix} \overleftarrow{\overrightarrow{3}} & 3\leftarrow\rightarrow & \overleftarrow{\overrightarrow{3}} & \leftarrow\rightarrow 3 & \leftarrow\rightarrow 3 & \overleftarrow{\overrightarrow{r}} & r\leftarrow\rightarrow & \overleftarrow{\overrightarrow{l}} & \leftarrow\rightarrow l \end{matrix}$

 $\leftarrow \overleftarrow{3} \leftarrow \overrightarrow{3} \leftarrow m \leftarrow \overleftarrow{3} \leftarrow \overrightarrow{3} \leftarrow \overrightarrow{m} \leftarrow m \leftarrow \overrightarrow{3}$

Finger move (forward)

 $\begin{matrix} \uparrow 3 & 3\uparrow & \overline{3} & \uparrow 3 & \uparrow r & r\uparrow & \overline{l} & 1c \end{matrix}$

 $\uparrow \overrightarrow{3} \uparrow \overrightarrow{3} \uparrow m \uparrow \overrightarrow{3} \uparrow \overrightarrow{3} \uparrow \overrightarrow{m} \uparrow m \uparrow \overrightarrow{3}$

Finger move (backward)

 $\downarrow \overrightarrow{3} \downarrow \overrightarrow{3} \downarrow \downarrow 3 \downarrow \overleftarrow{r} \downarrow \overleftarrow{l} \downarrow \downarrow r \downarrow \downarrow l$

 $\downarrow \overrightarrow{3} \downarrow \overrightarrow{3} \downarrow \overrightarrow{m} \downarrow \overrightarrow{3} \downarrow \overrightarrow{3} \downarrow \overrightarrow{m} \downarrow m \downarrow \overrightarrow{3}$

Finger move (forward / backward)

 $\begin{matrix} \uparrow \downarrow 3 & 3\uparrow \downarrow & \overline{3} \downarrow & \uparrow \downarrow 3 & \uparrow \downarrow 3 & \uparrow \downarrow r & r\uparrow \downarrow & \overline{l} \uparrow \downarrow & \overline{l} \uparrow \downarrow \end{matrix}$

 $\uparrow \overrightarrow{3} \uparrow \overrightarrow{3}$

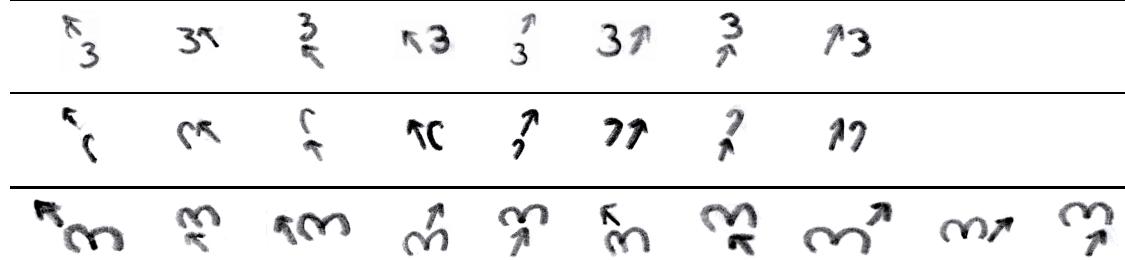
Finger move (down)

 $\begin{matrix} \overleftarrow{3} & 3\downarrow & \overleftarrow{3} & \downarrow 3 & \overleftarrow{3} & 3\downarrow & \overleftarrow{3} & \downarrow 3 \end{matrix}$

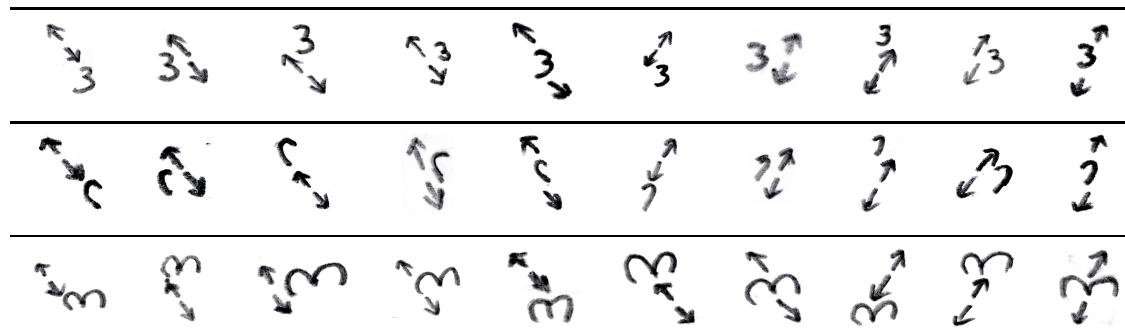
 $\overleftarrow{r} \downarrow \overleftarrow{l} \downarrow \overleftarrow{r} \downarrow \overleftarrow{l} \downarrow \overleftarrow{r} \downarrow \overleftarrow{l} \downarrow \overleftarrow{r} \downarrow \overleftarrow{l}$



Finger move (up)

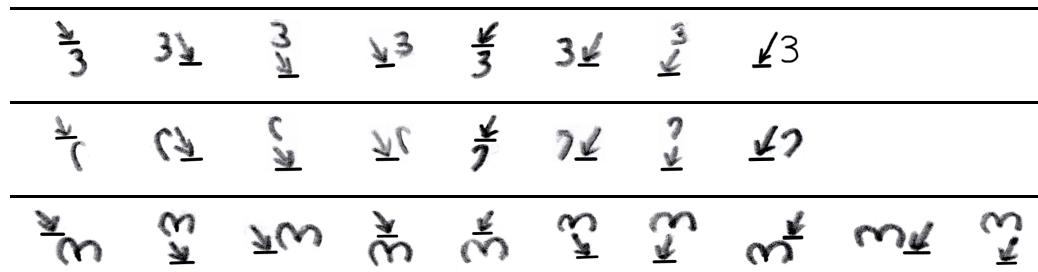


Finger move (up / down)



Finger Press

May be usually downward, not likely in other directions.

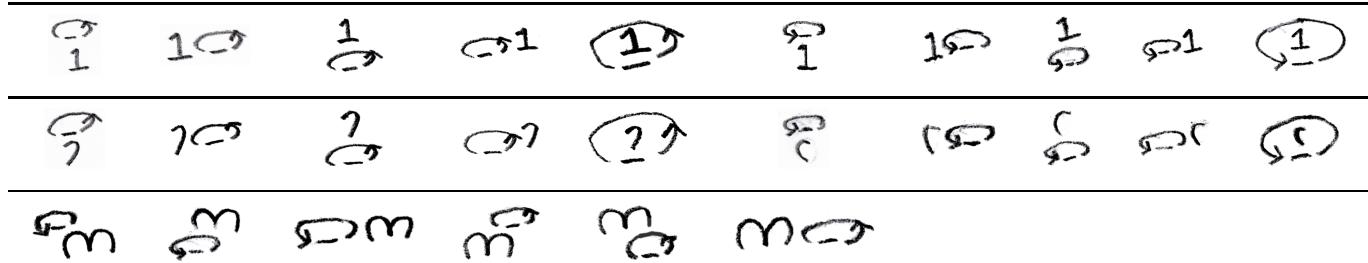


Finger Turn

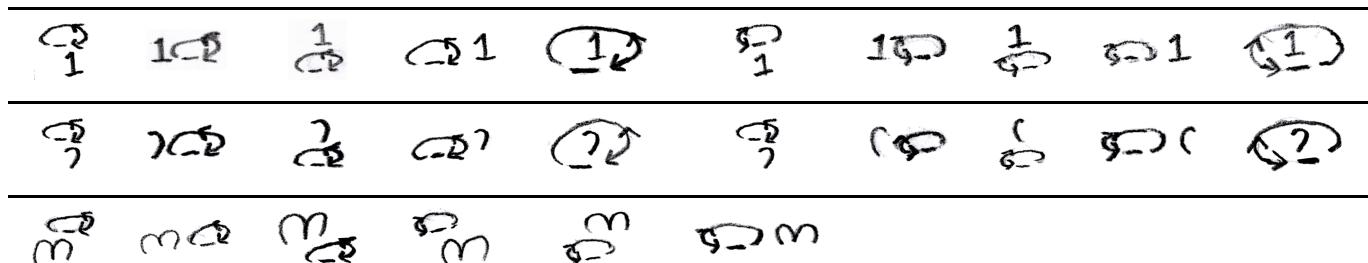
Finger turn (right / looking forward / thumb only)



Finger turn (left / looking forward / thumb only)



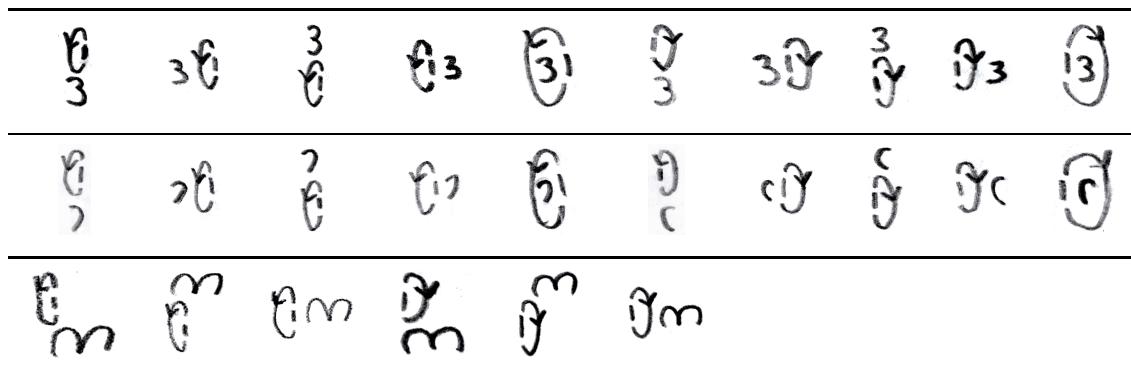
Finger turn (right & left / looking forward / thumb only)

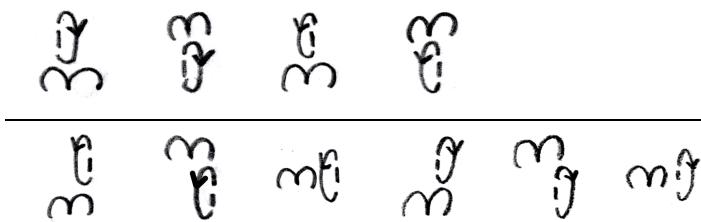


Finger turn (forward)

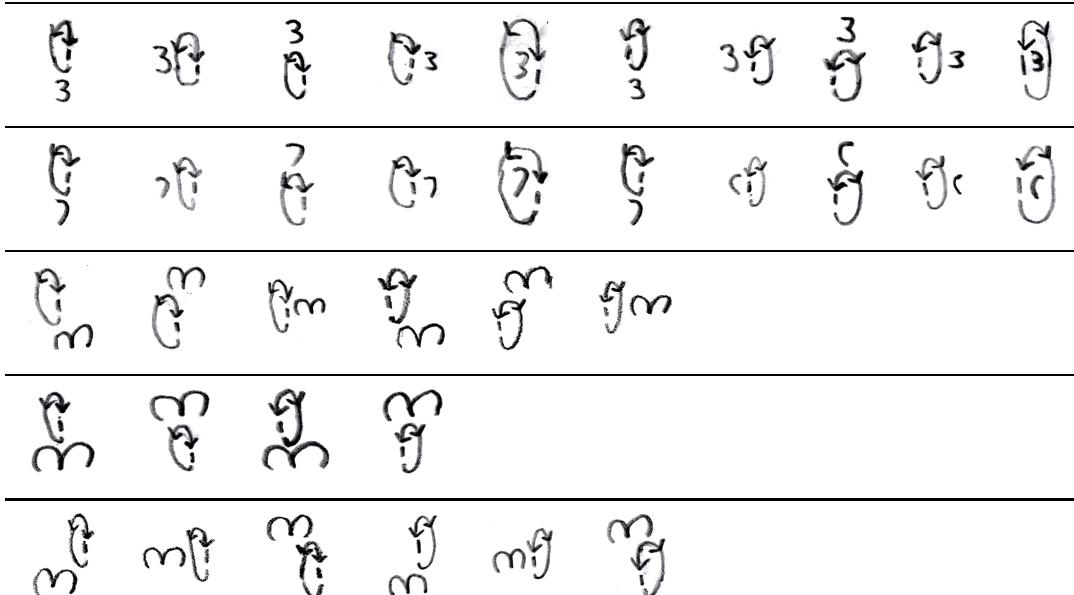


Finger turn (backward)

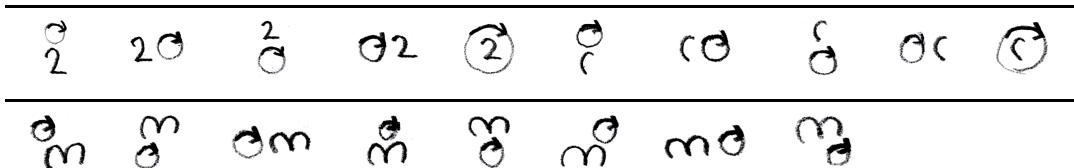




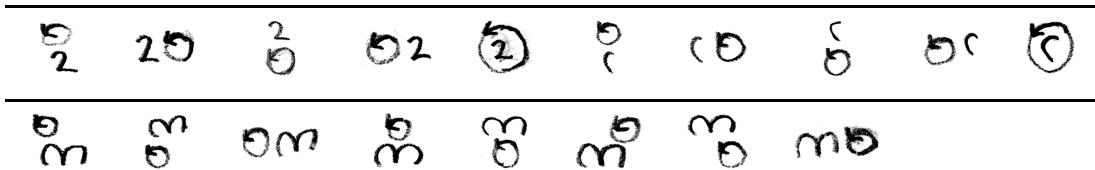
Finger turn (forward / backward)



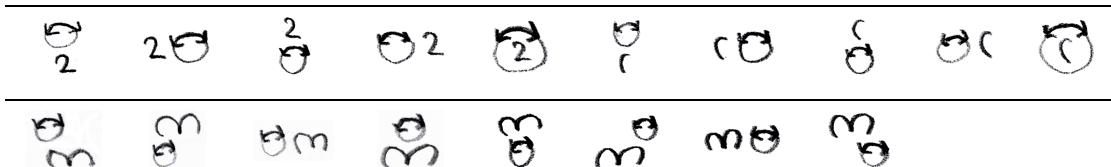
Finger turn (right / looking down)



Finger turn (left / looking down)



Finger turn (right & left / looking down)



Finger Turn Comment

Finger turning may coincide with finger moving,
but perhaps more of an emphasis on rotational motion.
Finger turning may happen over a pivotal point where the finger is attached.

Fingers may pivot over 2 axes:

- Forward up and down
- Sideways facing you (finger wagging)

The thumb may pivot over another 3rd axis (depending on orientation):

- Sideways oriented up and down

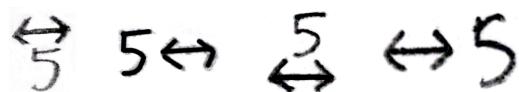
The fingers might not make full rotations, but partial rotation arcs.

Finger wagging may be aided by the friction of the other fingers on the key bed.

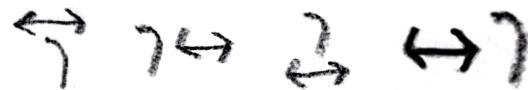
Finger Spread

Moving fingers wider away from each other stretching.

Finger spread (with number)



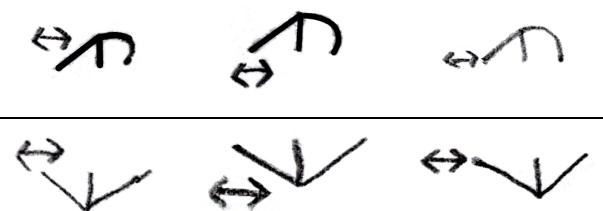
Finger spread (with symbol)



Finger spread (between finger numbers)



Finger spread (3 fingers, left finger)

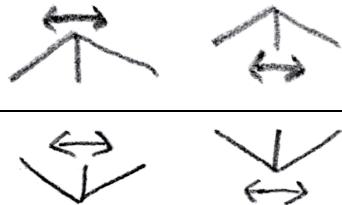


Finger spread (3 finger / between left / middle finger)

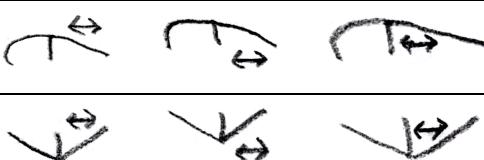




Finger spread (3 finger / middle finger)



Finger spread (3 fingers / between middle / right finger)



Finger spread (3 fingers / right finger)



Finger Stress

Tense all around, keeping stationary with force.

Tight Fingers	Loose Fingers
>5<	'5'
5	5
>6<	'6'
6	6
7	7
8	8
9	9
10	10

Tight Fingers**Loose Fingers**

Composite examples:

**Finger Enunciation**

Move fingers restfully



Move fingers slightly



Move fingers normally



Move fingers exaggerated

Finger Switch

Switch finger (in place)

Part of existing fingering notation.



Switch finger (at different times)

At different times same key with different fingers.

Wrist**Wrist Position**

With flat
fingers



Pronounced



Curved



High



Tilted (flat
fingers)



Tilted
(pronounced)



Tilted
(curved)



Tilted
(high)

Wrist Stationary

	Stationary (left-right)		Stationary (forward / backward)		Stationary (up / down)		Stationary (composite)
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Wrist Move

	Wrist move (left)		Wrist move (right)		Wrist move (right and left)
	Wrist move (down)		Wrist move (up / down)		Wrist move (up)
	Wrist move (forward)		Wrist move (backward)		Wrist move (forward / backward)

(These one-sided wrist moves may be similar to wrist turning:)

	Wrist move (down / left side)		Wrist move (up / left side)		Wrist move (up / down / left side)
	Wrist move (down / right side)		Wrist move (up / right side)		Wrist move (up / down / right side)
	Wrist move (forward / right side)		Wrist move (backward / right side)		Wrist move (forward / backward / right side)
	Wrist move (forward / backward / left side)		Wrist move (backward / left side)		Wrist move (forward / backward / left side)

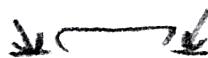
A composite, to show some flexibility:



Wrist move (composite)

Wrist Press

May be usually downward, not likely in other directions.



Wrist press (variation 1)



Wrist press (variation 2)



Wrist press (right)



Wrist press (left)

Wrist Turn

Wrist turn

(right / looking forward / 'pivot')



Wrist turn

(left / looking forward / 'pivot')



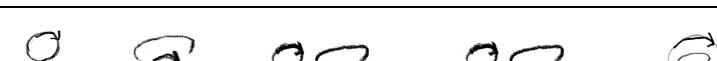
wrist turn

(right & left / looking forward / 'pivot')



wrist turn

(right / looking down)



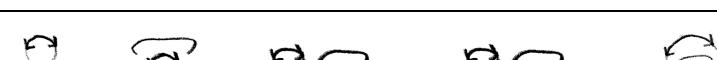
wrist turn

(left / looking down)



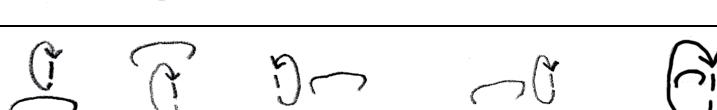
wrist turn

(right & left / looking down)



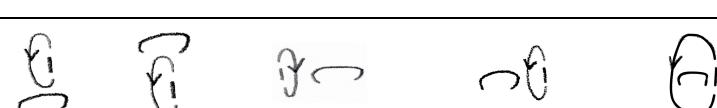
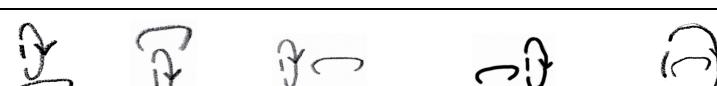
Wrist turn

(forward) / 'flap'



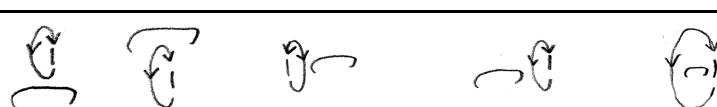
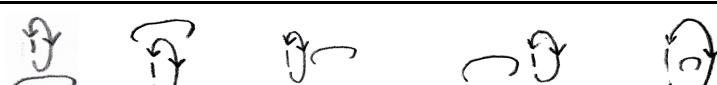
Wrist turn

(backward) / 'flap'



Wrist turn

(forward and backward) / 'flap'



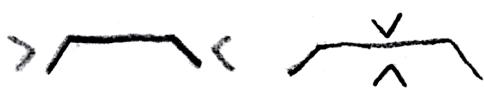
Implicit Wrist Turn

Wrist symbols might be optional for wrist turning.

	Implicit wrist turn (right / looking forward / 'pivot')		Implicit wrist turn (left / looking forward / 'pivot')		Implicit wrist turn (right & left / looking forward / 'pivot')
	Implicit wrist turn (right / looking down)		Implicit wrist turn (left / looking down)		Implicit wrist turn (right & left / looking down)
	Implicit wrist turn (forward / 'flap')		Implicit wrist turn (backward / 'flap')		Implicit wrist turn (forward & backward / 'flap')

Wrist Stress

(Combined with wrist positions.)

Wrist tight (flat fingers)	
Wrist loose (flat fingers)	
Wrist tight (pronounced)	
Wrist loose (pronounced)	
Wrist tight (curved)	
Wrist loose (curved)	
Wrist tight (high)	
Wrist loose (high)	

Arm

Arm Position Suggestions



Arm position (diagonal in / torso in front of right hand)



Arm position (diagonal in / far reaching)



Arm position (forward / elbow tucked in)



Arm position (rather unusual / upper arm forward, fore arm straight in)



Arm position (rather unusual / upper arm forward, fore arm in / backward)

Lower Arm

Lower Arm Position

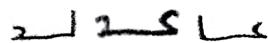
The *upper* arm is assumed to be hanging downward.

Lower Arm 1D Directions

Forward



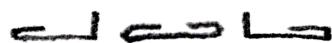
Up



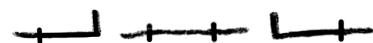
Down



In



Out



Lower Arm 2D-Diagonals

Forward-up



Forward-down



Forward-in



Forward-out



Up-out



Down-out



Up-in

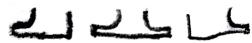


Down-in

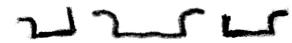


Lower Arm 3D-Diagonals

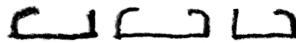
Forward-up-in



Forward-up-out



Forward-down-in



Forward-down-out



Lower Arm Backward

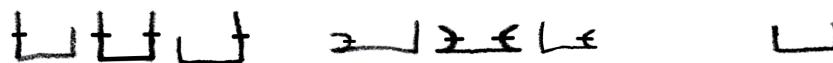
Backward			
Backward-out		Backward-in	
Backward-down		Backward-up	
Backward-down-out		Backward-down-in	
Backward-up-out		Backward-up-in	

Upper Arm

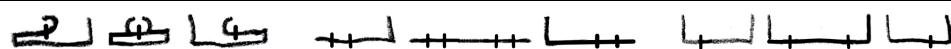
Upper Arm Position

Upper Arm 1D Directions

Upper arm <i>forward</i> (lower arm forward)	Upper arm <i>up</i> (lower arm up)	Upper arm <i>down</i> (lower arm forward)
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Upper arm <i>in</i> (lower arm up)	Upper arm <i>out</i> (lower arm out)	(lower arm forward)
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Upper Arm 2D-Diagonals

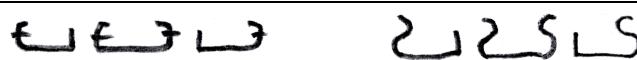
Upper arm <i>up-out</i> (lower arm up-out)	(lower arm down-out) (difficult, monkey arms)
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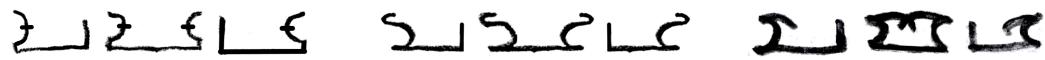
Upper arm <i>up-in</i> (lower arm up-in)	(lower arm in)
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Upper arm <i>forward-down</i> (lower arm forward-down)	(lower arm forward-up)
---	------------------------



Upper arm <i>forward-up</i> (lower arm forward-up)	(lower arm down)	(lower arm down-in)
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Upper arm *forward-in*
(lower arm forward-in)



Upper arm *forward-out*
(lower arm forward)



Upper Arm 3D-Diagonals

Upper arm *forward-up-in*
(lower arm forward-up-in)

Upper arm *forward-down-in*
(lower arm forward-in)

(lower arm forward-down-in)



Upper arm *forward-up-out*
(lower arm forward)

Upper arm *forward-down-out*
(lower arm forward)

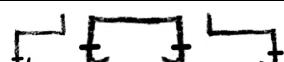


Upper Arm Backward

Upper arm *backward*
(lower arm down)

(lower arm backward)

(lower arm forward)



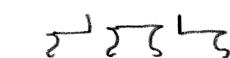
Upper arm *backward-out*
(lower arm down)

Upper arm *backward-in*
(lower arm in / painful perhaps)



Upper arm *backward-down*
(lower arm forward)

Upper arm *backward-up*
(lower arm down / painful perhaps)



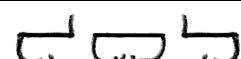
Upper arm *backward-down-out*
(lower arm forward)

(lower arm down)

Upper arm *backward-down-in*

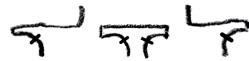
(lower arm down)

(quite a stretch)



Upper arm backward-up-out
(lower arm down)
(quite a stretch)

Upper arm backward-up-in
(lower arm backward-up-in)
(may be impossible)



Torso



Torso (+ arms)



Torso sway (right)



Torso sway (left)



Torso tilt forward



Torso tilt backward



Torso turn sideways (back and legs)

Some Fingers Deeper In Keys

3 fingers:

	Flat Fingers	Pronounced Fingers	Curved Fingers
Mid finger deeper in keys	↑	↗	⌞
Outer fingers deeper in keys	↗	↖	⌞
Right finger deeper in keys	↖	↖	⌞

4 fingers:



Flat / outer fingers deeper in keys



Curved / outer fingers deeper in keys



Curved / 3rd finger deeper in keys

Composite Examples

To demonstrate some possibilities for flexibility.



Fall in and then raise out of key



3 fingers: flat, pronounced and curved



Curved wrist flapping, mid finger pressed



Curved wrist hopping. 1st and last note pressed. Middle note moved forward, pressed with 3rd finger.