

INTERMEDIATE LEVEL FUNCTIONS AND SKILLS WITH THE PSIKOHOOP.

Intermediate level here does not refer to your actual hooping skills or experience, just to the familiarity and use of the psi-ko-hoop as an interactive instrument.

Once you have the basic skills, (connect and disconnect the hoop, turn the hoop on and off, charge the hoop, recognize the different starting orientations, have mastered the flip move to change displays = covered in the introductory tutorial), you may be ready to learn some more functions and skills with the psi-ko-hoop.

Gaining a familiarity and mastery of the next set of skills we can call the intermediate level, and these functions will greatly increase the range of displays and interactivity you can experience with the psi-ko-hoop. Beyond this intermediate level, the large tutorial document will take you further into the things already covered.....and further on into the rabbit hole!

Note that there is a series of videos that go with this tutorial document and the links for those are listed in corresponding sections of this tutorial and at the end of the document. Would be best to use both the videos and this document as you go along.

In order to understand this intermediate level you will need to be familiar with some of the terms we use, and as they appear, we will try to define them. Consult the larger tutorials for more in-depth definitions and descriptions and examples to follow along.

There is also a “crib sheet” of moves (at the end of this doc) that you can print and take with you as reminders for practice sessions.

SKILLS NEEDED: (covered in the introductory tutorials and in your previous hooping experience)

1/ connect and disconnect the hoop, turn the hoop on and off, charge the hoop, recognize the different starting orientations, have mastered the flip move to change displays and familiar with the side flip.

2/more hoop awareness and control (more familiarity with orientation of the hoop and steady/smooth hooping)

3/Isolations...being able to do a smooth and steady isolation with 2 hands, and in both directions (single handed isolations not required)

4/ Willingness to learn various movement patterns that signal the hoop. The patterns will be covered in the tutorials. The willingness is all yours.

5/Familiarity with an analog clock face. (Arc-ane knowledge...shown below)

CLOCK FACE



Mostly we use 12, 3, 6 and 9 in the instructions. Usually we say 12 o'clock, 3 o'clock etc but if the "o'clock" is omitted, those numbers still refer to a clock face.

Note that the clock face orientation is important – if you go behind your imaginary clock face, 3 o'clock turns into 9 o'clock and so on. If you know right and left, then 3 is right and 9 is left, 6 is bottom and 12 is top. On a compass, east is 3, west is 9, north is 12 and south is 6. If you don't like any of these symbols, then just get used to the feel and look of the different placements. You could also think of a move that went from 12 to 3 as a quarter turn, or from 6 to 12 as a half turn etc.

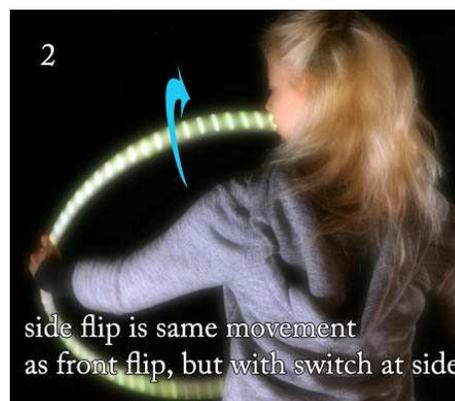
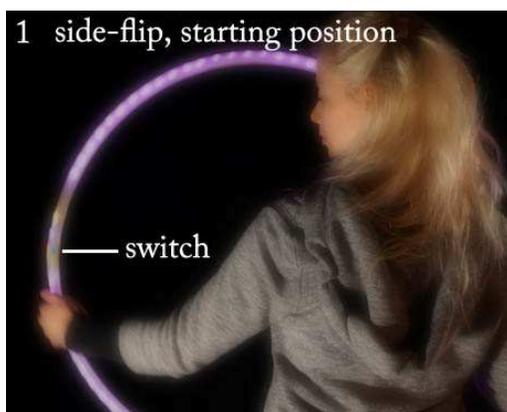
USE A LARGE MIRROR

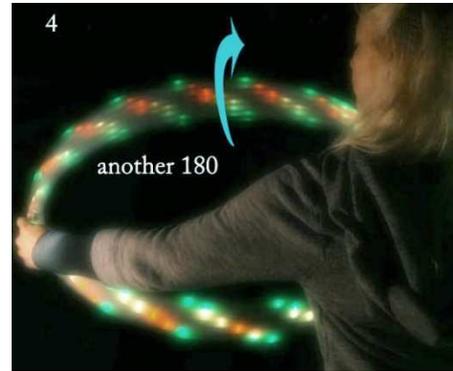
Its sooo much easier and better to have a large mirror (or window against a dark background) in order to learn the moves and see the displays – without a mirror, it can be very frustrating to try to familiarize yourself with all these new moves and learn the interactivity, so please do yourself a favor and work with a large mirror and enough space (10 feet from the mirror and room to move).

THE SIDE FLIP.

Tutorial video link http://youtu.be/rZqhtYnIP_w intermediate 1 flips

This is the same move as the front and back flip you learned in the "GETTING STARTED" section, but starting with the switch/connector area on the left or right side of the hoop, at 9 o'clock.



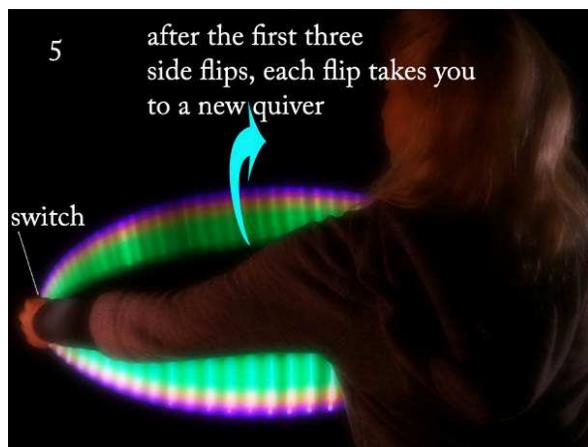


The side flip signals the hoop in a couple ways, depending on what you are doing. It will also allow you to reach new sets (quivers) of hoops.

SIDE FLIP TO NAVIGATE: If you switch the hoop ON with the switch facing you and at 9 o'clock (to the middle of the left side of the hoop as you look at it, with the switch facing you) you will be in a series of quivers that each focus on different types of displays. The first quiver was available to you with just the front flip move.

To get to the next quiver do three continuous side flips – that is exactly like 3 front flips but with the switch to one side of the hoop and not at the top. So if you turn on the hoop with the switch facing you and at 9 o'clock you are ready to do the side flips without changing the orientation of the hoop. 3 side flips will get you to the next quiver, and you will see a display that has 5 large segments of steady LEDs in white and blue or white and red. If you now front flip you will get to a series of super mellow hoops.

To get to the following quiver do 3 more side flips, and you will see a colorful filled display with alternating strobes and steady lights. You can front flip through those to check them out. Once you have done the first three side flips and you continue to smoothly side-flip, each flip will take you to a new quiver.



You can do the side flip move in the other direction, starting with the switch at 9 o'clock but rotating the top of the hoop back towards you, and you will navigate back through the quivers instead. Practice doing side flips in both directions. If you start with the switch at 3 o'clock the side flip will also work, but the directions are reversed.

There are 11 quivers available to you in this hooping environment, turning the switch on at 9 o'clock. If you want to navigate past several quivers, then do three side flips and just carry on side-flipping and now each side flip gets you into a new quiver. If you pause on one quiver, however, more than a second or two, then you will again have to do 3 side flips to proceed.

The side flip also navigates from one quiver to the next in the "saved pack". (Covered in detail later on in this tutorial). To open the save pack (also called saved quivers or 3 pack), turn the hoop on with the switch towards you and at 3 o'clock (to the middle of the right side of the hoop as you look at it, with the switch facing you). There are 3 quivers in the saved pack. This intermediate level tutorial will also show you how to save hoops in any of the saved quivers.

To go from one quiver to the next in the saved pack, do three side flips. As there are only three quivers in this pack, it doesn't so much matter if you side-flip forward or backward. So you could side flip with the button at 3 o'clock instead of 9 o'clock (which will turn a front side-flip into a backwards side-flip). If you continue without a pause beyond the 3 side flips you will change quivers with each flip, you don't need to do another 3 side flips unless you pause. The same navigation with side flips applies to the 9 o'clock orientation where you have around 9 different quivers.

SIDE FLIP AS SIGNAL: (Only in the top quiver, the one you get to by turning the hoop ON with the switch facing you and at the top of the vertical hoop). In this quiver three continuous side flips will engage a display that affects the lit arc of the hoop. With three side flips you get a dark section spreading around the hoop in both directions...the amount of the hoop that is lit is controlled by how much movement the hoop detects. If you side flip 4 times, instead of a dark section you will get a white arc that goes in one direction till it fills the hoop, again controlled by movement. These effects are sometimes useful to punctuate your hooping or match the rhythm of the music. To get rid of these effects you can turn the hoop off and back on in the vertical orientation or you can side flip (perhaps 5 times) till the effect turns off. Having the ARC control engaged doesn't prevent you from front or back flipping to other hoops in this quiver. (More complex ARC controls for use in other quivers are described in the full tutorials).

Side flip in compose mode has a different function, and will be described below in the section on compose mode.

As described in the "getting started" tutorial (which you need to have done before this one), the side flip has a different function in the random mode quiver (reached by turning the hoop on horizontally with the switch facing down). Here is a recap of what was described in the "getting started" doc for flips in random mode:

FLIPS IN THE RANDOM QUIVER

Tutorial video link: <http://youtu.be/5aRkNH1yIcA> intermediate_2_random_quiver

The front flip in random quiver also changes the display, but the next display will be a random selection from the quivers of the psi-ko-hoop. We call these random selected hoops. You cannot get back to the last display with a back flip in this quiver.

Since the hoop-displays in the random quiver are changing automatically, the flips in this quiver act to speed up or slow down the rate of change. The default setting is about 5 seconds. By doing front flips you can speed up the rate to a maximum of around once every $\frac{3}{4}$ second or about 90 beats a minute. For example, 7 front flips (keep them steady and even) will get you to about 60 BPM. You don't have to do all the front flips at one time, but they do add up. Each time you do a front flip correctly you will see the display change.

Back flips in the auto random quiver will slow the rate of change. Down from the default of about 5 seconds to over 20 seconds with around a dozen flips. The display isn't supposed to change when you are doing a backflip but depending on the speed of your flip and the current rate of change of the displays, it just might.

A side flip in the random quiver - You could do the side flip backwards or forwards, it doesn't matter here. So you could do the side flip with the button switch at either 9 o'clock or 3 o'clock and either facing you or facing away from you. The side flip gives a red confirmation signal when you do it correctly and it locks the current display...so if you are in random mode and you see a hoop you really like, do a side flip and then you can play with that hoop as long as you like. (as long as you don't do another front flip which will then take you to another display).

Regular hooping moves should not trigger a shift of hoops, but in the intermediate level tutorial you will learn a move to lock a hoop so it doesn't flip out. Meanwhile just know that if you really like any of the hoops you will run into them again in your explorations and by then you will know how to lock them or save them, or change them and also create them.

For now, doing a side flip in the random quiver (red confirmation signal) allows you to stop the automatic changes and go to manual – so if you want to manually change displays, after doing a side flip and getting the red confirmation signal, you can just do front flips whenever you like, and be surprised with each new hoop you get. You can time these changes to the music or your movement to add accent and character to the hoop dance.

Note that some of the hoops that appear will be “complex” hoops that change displays based on movement, or seem to automatically change displays...but these are actually individual

“hoops” with complex characteristics. You will find these complex hoops also in one of the packs in the 9 o’clock orientation, and in the kix quiver.

When the hoop is on manual in the random quiver (you have done a side flip and gotten a red confirmation) then a back flip also changes the display but it selects from a truly random set of hoops that include many more strange and wondrous hoops in hidden quivers of the psi-ko-hoop and others that are generated on the spot, hopefully influenced by the energy around! We call these hoops “random generated” to distinguish them from the “random selected” of the regular random quiver. So this quiver has thousands of hoops in it. (virtual reality and the imagination –w-hoop-ee)

To unlock a hoop and go back into automatic changes in the random quiver, do another side flip in either direction and see the green confirmation that you are in auto. Now the front and back flips will again vary the rate of change from around $\frac{3}{4}$ second to around 20 seconds.

2/MORE HOOP AWARENESS AND CONTROL (more familiarity with orientation of the hoop and steady/smooth hooping).

Take time to review the skills of the front flip, back flip and side flip in several different hooping environments within the psi-ko-hoop (you arrive in a different hooping environment by turning the hoop ON in a different orientation).

Can you routinely change displays with a front or back flip? Can you incorporate those into your dance, expression or performance so that they feel and look natural and you don’t have to think about them?

Can you recognize the different orientations easily, effortlessly, and know where the switch is whenever you need to find it? Do you remember to have the switch facing you when you are going to navigate the menus?

Can you side flip from one quiver to the next in the 9 pack? (pack of quivers that is accessed by turning on the hoop with the switch facing you at 9 o’clock) Can you navigate within each quiver with front flips and then change quivers again?

Can you easily engage the ARC controls in the quiet quiver? (turning the vertical hoop on with the switch facing you and at the top of the hoop). Can you control the amount of white or dark arc with smooth and steady movements?

Can you speed up and slow down the rate of change of displays in the random quiver (hoop horizontal and switch facing down)? Can you lock a hoop in that quiver using a side flip? and then unlock it? Can you hoop with a locked display in the random quiver and not have it disappear?

If any of these above are giving you trouble or don’t feel natural, then please slow down and master it before going on. To use the psi-ko-hoop as an intuitive/ expressive instrument for enhancing your

dance, and communicating your feelings and intentions, you need to have the above skills mastered, and automatic - with just these skills you could put on a wonderful performance or keep yourself and other interested for a long time!

If you can do all the above, then its time to proceed:

3/ ISOLATIONS

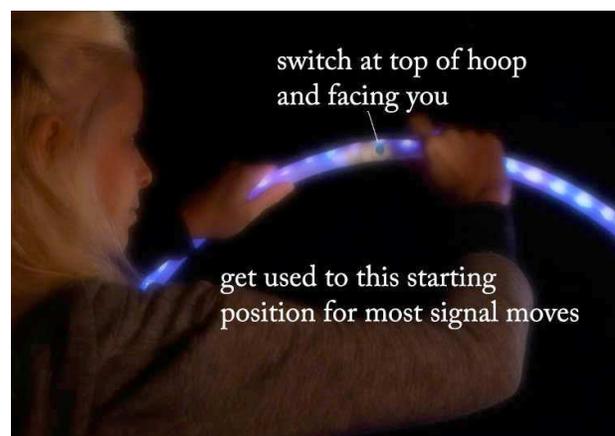
When you turn a steering wheel left or right, the center part/hub of the wheel remains stationary. That is an isolation. If you take a bicycle and lift the wheel off the ground and spin the wheel, that is also a simple isolation. A ceiling fan is held in place/isolated in the center, and the fan blades spin around that center. When a hoop turns around its (imaginary) center point, we call that an isolation.

When Merlin was learning to hoop in the early 2000s, the simple isolation was his favorite move and was called by many - Merlin's Wheel. Merlin's wheel (or if you like, more simply, the wheel) is an isolation that is used to signal the hoop in some way...and thus also to communicate with others.

There are you-tube videos and other descriptions on the web of different kinds of hoop isolations, and various ways to learn them. For me the easiest way is to stand in front of a large mirror. Then you can see more clearly if the hoop is bumping up and down or side to side or jiggling around. As you rotate the outside of the hoop you want to keep it as smooth and steady as possible. If you are outdoors you can use the sun behind you to cast a shadow of the hoop on a wall or the ground and get an outline of the hoop that way.

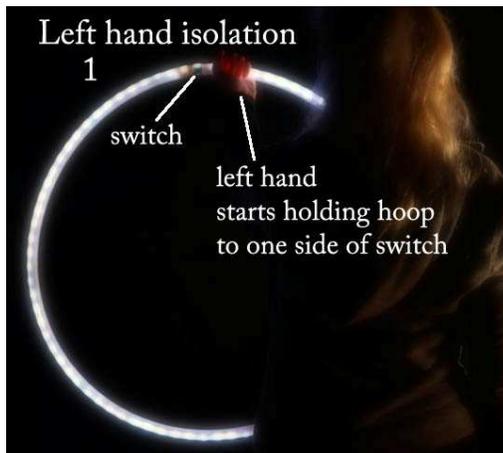
If you don't have a mirror or the sun to help you, line up the top of the hoop with some object in the distance and keep the top of the hoop steady and in one place as you rotate it.

Try small rotations in either direction, going say $\frac{1}{4}$ way around the circle and back, and see how steady and smooth you can be. You wont need to be absolutely exact in doing your isolations in order to signal the psi-ko-hoop correctly, but the smoother, steadier and more exact you are, the more predictable the results.



The exercises in the next section on hoop signals can really improve your isolations, so you don't have to perfect them here yet.

To start off, use both hands, like you were turning a large steering wheel, as on a bus or a boat. You need to keep the hoop fairly still in terms of up/down and side/side movement, so the hoop turns like a steering wheel staying in the same place and rotating around its center.



Note: In the photos of the left hand isolation shown here, the psi-ko-hoop is in a “wheel select” mode where, as you turn it, the color schemes change, allowing you to select a color scheme or play inter-actively with the colors. This function is covered in the “select color” and “compose mode” further on in this instruction set. Here it is shown just to illustrate the isolation move.



Then practice moving/steering the wheel with one hand and guiding it with the other. Use both hands whenever necessary as you turn the wheel. No need to try doing a full isolation with just one hand. Doing a smooth controlled and complete isolation with just one hand is an advanced skill and not needed here. Most of the moves involving isolations will use just a small part of the circle, or up to half of it, and its much easier to do a half isolation with one hand than to go all the way around using just one hand. Any signal moves that require a full isolation you can do with both hands.

Practice this isolation move starting with the left hand (then turn clockwise) and then also starting with the right hand (then turn anti-clockwise).



The wheel turns in the direction that feels easiest and most natural, depending on which hand you are using.



Understanding how we use the term “hoop” in the psi-ko-hoop

NOTE: I have been putting “hoop” in “quotation marks” to indicate that it is a virtual hoop, or a specific hoop display, one of hundreds within the psi-ko-hoop, and from now on I will mostly leave off the quotation marks and just refer to each display or set of displays as a hoop. Some hoops in the psi-ko-hoop have several displays within them which change based on qualities of movement etc, so we cant really refer to them as “displays” either, because they can be sets of displays.

So when playing with the psi-ko-hoop you are always in a “hoop”, and that hoop is in a quiver of hoops. You shift from one hoop to another by flipping forwards or backwards or changing orientations. In compose mode there is only one starting hoop, which you can make morph into practically any other hoop, but you can also refer to all these as hoops – and you can take any one of them out of compose mode into the saved quivers. In random mode, hoops appear automatically, selected from all the quivers in the psikohoop. Any of these hoops can be saved individually. In fully random mode (the side flip in random to go into manual and then the backflip) hoops are created by the psi-ko-hoop in real time, and you can also save these, so each one is a distinct hoop. Hoops that have movement responses may look very different from one moment to the next, depending on how you are moving them, but they are still the same hoop and can be saved as a hoop that has the same characteristics. The “complex” hoops which may also include autocycling displays within them, can also be saved and function as one hoop. You cant save just one display within a complex hoop, you will save the hoop with all its characteristics.

You can import any hoop into compose mode and alter its character and save that. You can change many of the settings of any hoop with the signal moves that are described below. Its still the same hoop though it looks different. So you could use the term “hoop” in the psi-ko-hoop to refer to a display or set of displays that functions, and can be saved, as one unit.

4/SIGNAL MOVES

Tutorial video link: <http://youtu.be/2QiGR1cTLoU....> intermediate_4_signal_moves

In the psi-ko-hoop “signal moves” are movements that tell the hoop to do something. These signal moves are ways to navigate through the menus and also to select different parameters to change displays in real time or through set programs.

There are 2 hoops in the vertical orientation/quiet quiver that can serve as a training set to make the signal moves easier to understand and perform successfully.

Turn the hoop on in the vertical orientation. You will see a turquoise color confirmation and then if you are at the start of this quiver you will be in a gradient orange/yellow/red display which changes colors depending on the angle and rotation of the hoop. If you are not in this display then please flip frontwards or backwards till you get to this hoop. You will learn how to do a quiver reset move later on in this tutorial, which will make it easier to navigate and clear settings and so you can immediately get back to the default hoop in a quiver. But for now the flips will work.

Do a smooth and steady slow back flip and you should notice (when you are about $\frac{3}{4}$ of the way around the complete flip) that the display changes to a short segment of around 10 purple lights, and then as you complete the flip another turquoise segment appears. This “hoop” can show you how the orientations are being recognized.

Slowly and steadily reverse just the past part of the move you did, having the top of the hoop now go away from your face and down to horizontal (the start of a front flip, but only $\frac{1}{4}$ of the way around the flip) and then back to vertical and down to horizontal again and back to vertical etc until you have filled the hoop with alternating segments of purple and turquoise.

What you are seeing is the result of the programming in the chip that takes the data coming from the sensor and controls the LEDs. It recognizes angles and orientations and changes the display accordingly. Experiment with seeing how speed, position and movement qualities affects the display. You won't have to go all the way up to vertical or all the way down to horizontal to get a change. If you flip right out of this hoop then back flip or front flip to get back to this one. On one side of this training hoop is the default starting hoop for the quiet quiver and it is a gradient of color. On the other side of the training hoop is a hoop with a solid color all the way around the hoop. So you want to get back to the hoop in between those two.

Hold the hoop steady and vertical with the switch upwards and facing you, ready to do a two handed clockwise isolation. Your left hand will be up at the top of the hoop near (but not on) the button switch, and your right hand will be somewhere around 3 o'clock. Using your right hand as a guide to steady the hoop and define its path, start a slow isolation to the right, the button going from 12 o'clock to 3 o'clock and notice where in the arc the yellow segment appears. Should be around 2 o'clock and it's telling you that the hoop is recognizing a new orientation. When you get to 3 o'clock, pause, and notice that the turquoise segment disappears, telling you that the hoop no longer recognizes the vertical orientation. It will take a second for this to happen. Then continue slowly in your clockwise isolation towards 6 o'clock and notice when the red segment appears. Hold the hoop (specifically the button switch/connector) for a second at 6 o'clock and the yellow segment will disappear. Continue around towards 9 o'clock and a pink segment will appear and then go on all the way round to the top again and you should be in turquoise.

Do this isolation at various speeds and watch the play of the colored segments. Try reversing the isolation and doing it in the opposite direction. Try doing $\frac{1}{4}$ turn isolations, for example from 12 o'clock to 3 o'clock and back to 12 and then back to 9 and 6 and 9 and 12 and 3 etc etc until you can create predictable patterns of colors. Many of the signal moves will use these skills, although in a regular signal move you won't see the colored segments at all.

Now start with the hoop in the vertical orientation again, with the switch facing you and at the top of the hoop, and once again gradually drop the top of the hoop away from you, from vertical to horizontal. You will see a purple segment appear, as the hoop recognizes one of the horizontal orientations. Now if you continue with the same movement, allowing the switch to dip below horizontal you might give the “flip” signal and the hoop might advance to the next in

the quiver, which should be back to the first hoop in the quiet quiver, the gradient of orange/yellow/red. So if you don't want to trigger the "flip" signal, go ultra slowly and you will see the red segment for the downward vertical orientation, and then a blue segment for the other side horizontal orientation. You can play with ways to move this hoop without triggering a flip signal, and you will be able to use that skill in compose mode.

So you have 6 orientations in this hoop, each represented by a color, and you can practice combinations of these and notice where and when the segments appear and disappear.

The segment colors in this hoop also are the same as the orientation color indicators for each of the 6 orientations and their respective quivers of hoops. Here is a list of them again:

Quiet quiver....switch UP (12 o'clock) and facing you. Flashes turquoise.
Saved quiver/3 pack quiver...switch to the right/3 o'clock and facing you. Flashes yellow.
9 PACK quiver....switch on the left (9 o'clock) and facing you. Flashes pink.
KIX (Quixotic) quiver....switch UP with hoop horizontal. Flashes purple.
Random quiver....switch DOWN and hoop horizontal. Flashes blue.
Compose quiver.....switch at bottom (6 o'clock) and facing you. Flashes red.

It will be easier to play freely with this segmented practice hoop once you have learned the first signal move here, because you can lock this hoop so it won't be affected by flips:

The first signal move to try is the "LOCK DISPLAY" move. This will lock the current display so it won't be changed by any other hoop movement. As you are flipping through various displays you may come to one that fits your mood and purpose at that moment and want to stay with that display without accidentally flipping into another one. That would be the time to use the lock display move. After doing the "LOCK DISPLAY" move, when you flip, the display stays the same.

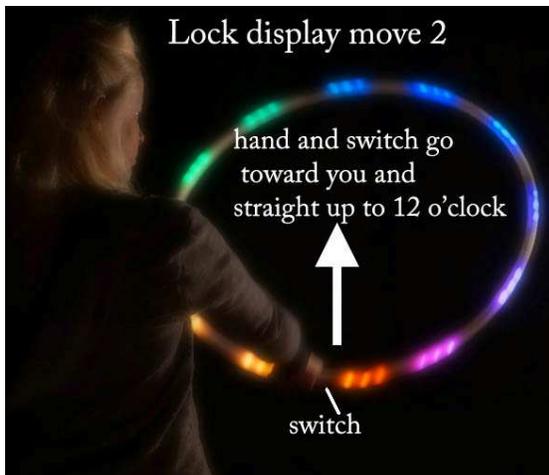
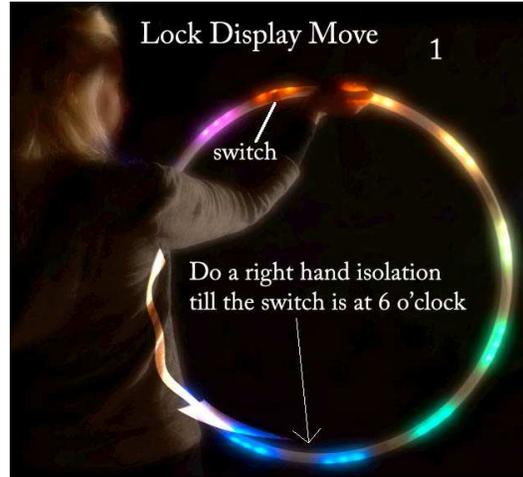
To unlock the hoop you do the same "LOCK DISPLAY" move again. When you correctly signal the hoop with any of these moves you will get a confirmation color, the whole hoop goes a solid color for an instant to let you know it has received your signal. In the case of this "LOCK" move the hoop will flash blue to show you it's now locked in that display. If you want to toggle out of "locked" back into regular FLIP-mode, then do the "LOCK" signal move again, and when you get it done correctly the hoop will flash white to show it's now free and clear.

There are a couple more ways to clear the "LOCK DISPLAY" function and they will be covered later.

LOCK DISPLAY MOVE: RH ISOFLIP, HALF-BACK.

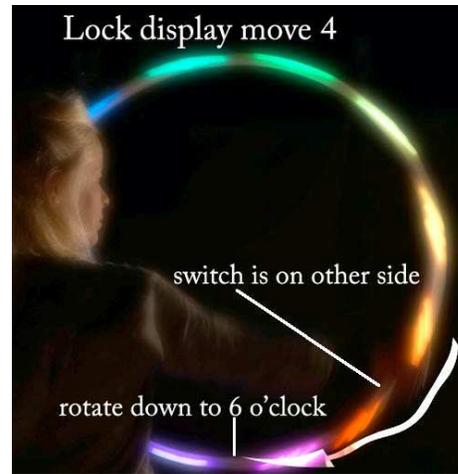
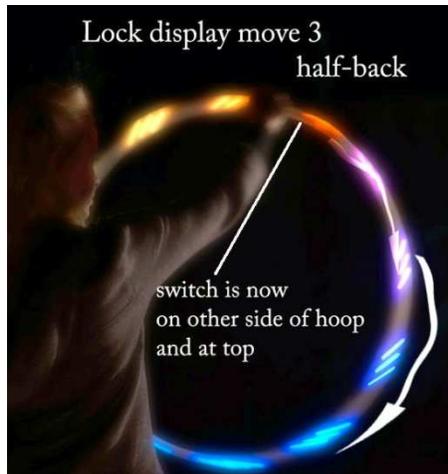
The easiest way to learn this move would be to have a more advanced psi-ko-hooper show you, and it would take you less than half a minute to master it. Or please watch one or more of the instructional videos. But lets say you are on your own with no internet.... What the hoop is a RH isoflip?

We define **ISOFLIP (also called psi-ko-flip)** : a half rotation of the wheel, (an isolation movement), starting with your hand on the connector area of the hoop with the switch facing you and at the top of the hoop, your hand facing upwards with the tube resting in it, and then going around an imaginary wheel till your hand, connector and switch are at the bottom of the hoop.

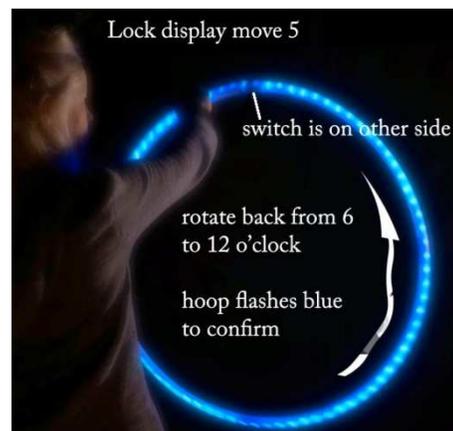


Then instead of continuing around the circle or reversing the circle, you bring your hand towards you and up to the beginning location....this part of the move is a circle up to the starting position but in a different plane, at right angles to the first one. The switch will now be pointing away from you. You have flipped the hoop while keeping its axis or center point in the same place. Iso-flip or psi-ko-flip.

To do the half-back, you now do a half isolation or turn of the wheel, still holding the hoop with your right hand and going through 3PM to 6 PM



and then back through 3PM to 12PM.
When the move is completed correctly, the hoop will flash a solid blue to confirm that it is now locked.



A RH isoflip (RH for Right Hand) starts with the right hand holding the hoop, palm facing up. The movement is counter clockwise, or the most natural way for you to do an isolation with your right hand. Since we are using the term clockwise, we may as well continue with the clock analogy. Isoflips start at 12 o'clock and end up there. An isoflip can be done with either hand though when we started making the signal moves, we used only the left hand, so if it just says "isoflip" it means with the left hand.

So the move is:

LOCK DISPLAY: RH ISOFLIP, HALF-BACK.

IF YOU USE THE TRAINING HOOP FROM THE QUIET QUIVER, THIS MIGHT BE EASIER

Start with the right hand and go counter-clockwise from 12 o'clock to 9 o'clock to 6 o'clock, and then straight back up to the top as in any ISOFLIP. The switch will now be at the top and facing away from you. To do the half-back, you now do a half isolation or turn of the wheel, still holding the hoop with your right hand and going through 3PM to 6 PM and then back to 3PM and 12PM. The move needs to be steadily consistent all the way through the isoflip and half-back. If you have trouble getting the hoop to respond to your move, you might want to start deceleration a bit before you get to 6PM, and actually not go quite all the way there, perhaps only to 5:30 or so. Its quite delicate. The main thing is to go smooth and steady, and not too fast. When the hoop gets your signal it will all flash blue to confirm.

The whole move will take around 4 to 8 seconds to complete, just to give you an idea of the speed of the moves. Taking much shorter or longer than that will probably not result in a recognized signal.

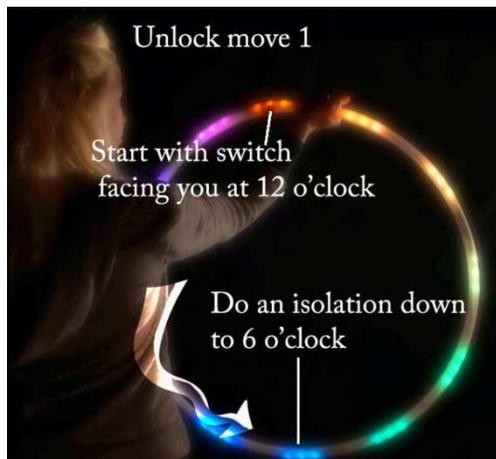
If you do part of this move and then stop for some reason, the hoop will reset in two seconds. So start the whole move again. This principle applies to all the signal moves.

If you are using the segmented training hoop, you will see turquoise at 12 o'clock, then as you do your counter-clockwise isolation you see pink at 9 o'clock and red at 6 o'clock. You should still see the turquoise/pink/red segments – if you are going too slowly or pause too long then the previous segments will disappear, and the hoop will not be able to understand your signal. As you do the isoflip with the right hand going “straight” up to the not (not an isolation but part of a flip move) you will see the purple segment again and then the turquoise. As you rotate the hoop now clockwise you might expect to see a yellow segment at 3 o'clock but because the switch is now facing away from you it will act as 9 o'clock (mirror image or like looking at the clock from behind it) and you will again see pink and then turquoise. All the segments should still be there by the time you complete the move. You will see the whole hoop flash blue (LOCKED) or white (UNLOCKED) to confirm.

If you turn the hoop off with a display locked, then when you go back to that quiver by turning the hoop on in that orientation, even if you have been playing with loads of other hoop displays, the same display will still be locked. This is so you can store a favorite hoop in each hooping environment, to access for a performance or practice. A little later on in this set of instructions you will learn how to save any hoop display into a separate hooping environment and that will give you more access to a set of favorite hoops or a set of hoop displays designed for a special purpose. The save move is slightly more complex than the lock move which is part of the reason we are showing that one first.

UNLOCK DISPLAY:

DO THE SAME MOVE: RH ISOFLIP, HALF-BACK and you will clear it.



You will see an all white flash -confirmation signal to indicate the hoop is no longer locked. The photos here don't show the completion of the isoflip and the half back – they are the same moves as in the LOCK move.

The LOCK display move is an example of a “TOGGLE” move. Each time you do the move you either toggle the setting ON or OFF. There is another kind of signal move = “SELECT” moves – they set the hoop into a mode where you can then select (using a wheel turn) settings from a variety of choices.

So now you can LOCK and UNLOCK a hoop. Maybe you only need one hoop for a whole performance, and so best that it is locked into place. Note that it is the “hoop” and not the display that is locked, so if the hoop has a display that is constantly varying or cycling or responding to movement in a certain way, it will still do all that when its locked. It just wont change into another hoop until unlocked.

One more time - Go back to the segmented hoop that is a backflip from the default first hoop in the quiet quiver (vertical orientation). Once again do the lock hoop move. Notice the segment colors responding to the sequence of your moves. Once the hoop understands your signal, it will give a blue confirmation (the whole arc lit for a flash) and now you will be able to play with this segmented hoop freely without going into any other hoop display. This is an opportunity to practice your smoothness and timing and to understand the physics of the signal moves – try doing the LOCK DISPLAY move jerkily or with bad timing (too fast or too slow or with pauses) or introduce variations in it, so that it doesn't work, and then try it so that you know it will work. When you do the move correctly you will either get the blue flash = Locked, or the white flash = unlocked. Same principles will apply to all the other signal moves.

SIGNAL MOVE DOESN'T WORK:

If you do the move and don't get the result, check these things:

Did you do the move too fast?

Did you start the move too soon (less than 2 seconds) after the previous try?

Were there jerks, bumps or uneven movements in the move?

Did you pause too long while in the middle of the move?

Did you start with the switch in some other position than facing you at the top of the hoop?

Is the hoop charged enough?

Did you actually complete the move fine, but didn't notice the confirmation color?

Did you do the move incorrectly?

Watch a youtube video of the move and have a mirror in front of you to check how you are doing it. Its often hard to get good feedback without a mirror. Play more with the segmented hoop as described above.

RESET MOVE

Tutorial video link: <http://youtu.be/gMmuj2zVoT0> intermediate 3 reset move

Another way to clear the LOCKED hoop is to do a reset move. The simplest way to do this is to start with the hoop completely OFF. Turn it on in the orientation you want to clear. Watch closely as the hoop lights up and you will first see a very brief white flash and then the green battery level indicator for a second and then the color confirmation for the orientation you are in. That color confirmation will last about a second, maybe a fraction longer.

Immediately/instantly when the color confirmation disappears and the actual hoop display appears, start shaking the hoop vigorously either up and down or side to side or a mixture of these. By vigorously we mean more like a dog shaking a rope than a lady shaking hands. But try doing the move with less and less force until you can do it repeatedly with a minimal movement. And by immediately we mean instantly, right after the display changes from orientation signal to hoop display - faster than the time it takes for a New York cabbie to lean on their horn after the lights go green. You are looking for a red arc that starts at the connector/switch area and spreads around the whole hoop as you continue shaking. When the arc completes a circle the move is complete.

That red arc will take a second to appear after you start shaking, so give it a couple seconds to see if its going to work, before trying the move again. If you start shaking too early the reset move wont work, and you will get unexpected results. You will probably jump into another orientation. Turn the hoop completely off and try again. You are looking for that red arc to spread all the way around the hoop. If the arc stops part way through, then you didn't complete a reset. If you start the move a fraction early then you may see the red arc go all the way around but you may end up in another quiver. So wait for the confirmation color signal to be replaced by the actual hoop display and then shake like crazy and continue shaking till that red arc goes all the way around.

Perhaps the easiest/best way to shake is to make a circle with your forefinger and thumb around the tube of the hoop and have the hoop inside that circle bounce around. Or if that shakes you into another orientation, try a short up and down movement.

Its also easier to do the reset starting from vertical with the switch at the top (the quiet quiver), so try that first. When doing a reset of other quivers by holding the tube in a circle as described above (as opposed to just grasping the hoop with both hands) you might try supporting the hoop with your other hand as you jiggle it with the hand near the switch. Don't start the move too early, when the orientation is still loading and the orientation color hasn't appeared yet, because you wont reset the correct quiver.

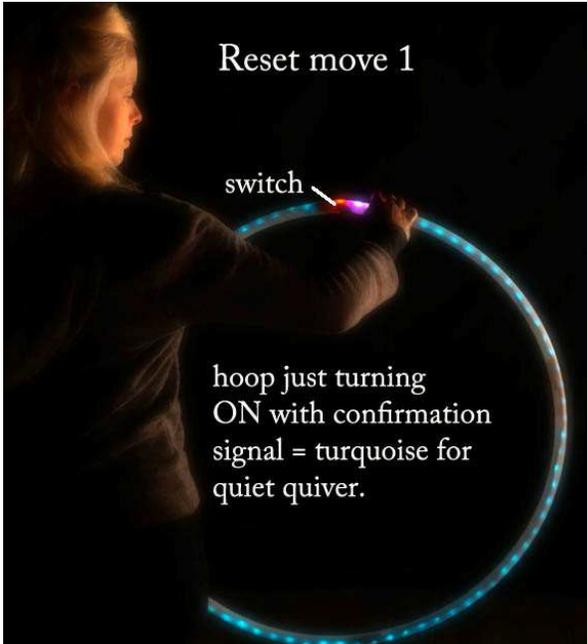
This reset move will clear any of the hoop settings for the quiver you are in, and return to the default.

So try locking a hoop display in the quiet quiver (hoop vertical with the switch at the top and facing you). Check that flips will now not change the display. Turn the hoop off and back on in that same orientation and check that the same hoop display is there and wont flip out. Then turn the hoop off and back on in the quiet quiver orientation and do the reset move. Check that you can now flip out of that hoop display into the other "hoops" in that quiver.

Once you can do this reset move reliably when the hoop is first powering up, then you can try the slightly more delicate task of doing the same reset move from a half-off state. (The half-off state is what you normally use for changing orientations/quivers without fully powering the hoop off). The only reason the reset move may be more challenging doing it this way is the timing. Press and hold the switch button till you see the green battery charge indicator and then the color confirmation for that particular orientation – and just when that color confirmation is replaced by the actual hoop display immediately start shaking the hoop quite vigorously. Start once again by resetting the vertical (switch at the top) orientation and then progress to the other orientations.

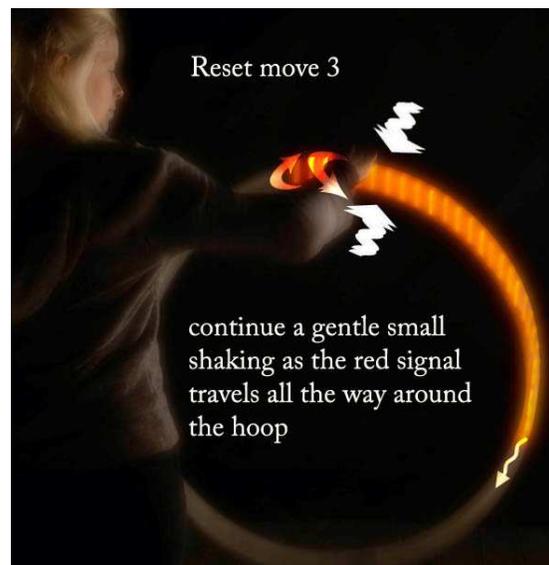
You should see a red arc growing all the way around the hoop if you have the timing right and are shaking vigorously enough. The timing of the start of this move is precise. If you do it too early, when the hoop is still displaying battery charge or still loading that orientation, you may

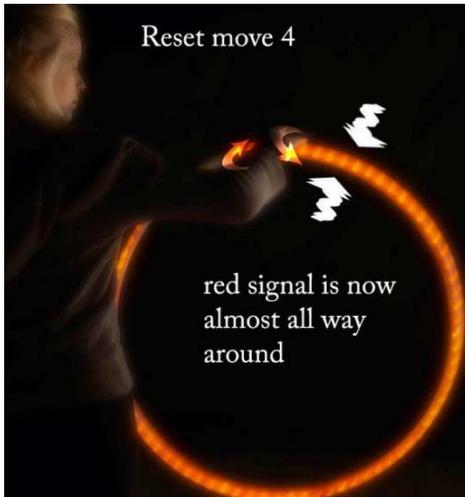
not reset the quiver you want or you may just jump into another orientation. Remember you have to continue to shake the hoop vigorously and continuously till the red sequence has gone all the way around, or you won't get a reset.



If you start shaking too early the hoop wont know what orientation you are in, and what to clear. You may end up resetting another orientation. If you wait too long the hoop wont listen to your shaking signal because it may think you are now hooping or playing. If you shake too vigorously you may jump into another orientation....so its trial and error.

One way is to shake the hoop is to make a circle with your forefinger and thumb and have the hoop inside that circle and just bounce it up and down or wiggle and shake it till you see a red sequence go all the way around the hoop.





When that red light goes all the way around the hoop, everything is reset to its starting place for that quiver.

If you move the hoop way too chaotically you may accidentally trigger it to go into another hooping environment, and you will end up with a different display. More likely in this case is that you started shaking a fraction too early. If that happens, turn the hoop off and then back on again in the orientation you wanted, and see if that quiver reset. If it did reset, you will be back in the first hoop of that quiver. If it is still in the same hoop that you originally were trying to clear, then try again with the reset move. Turn the hoop on, wait for the confirmation color to turn on and off, and just after the first hoop display appears, start shaking. Try shaking less violently.

Once you get to know the starting hoops in the different hooping environments, this will be easier to recognize.

What is needed for a successful reset move is correct timing and movement. After you start the shake/wobble/bounce, the reset move may take over a second to get started, but if you have been shaking for more than 3 seconds and you don't see a red light start to grow around the circle, then turn the hoop off and put it in the correct orientation and try again.

The reset move is really not difficult, but it may take several times at first till you get the feel for the timing and movement.

Practice this reset move because it will come in handy when something is not working as you think it should in a quiver, or when you don't know where you are in that quiver.

Note that the reset move you just learned is not a global reset. It just resets the hoops in the "quiver" you are in. The global reset is covered later in this tutorial document.

The reset move works differently in the saved quivers at 3 o'clock. It works individually for each of the 9 possible saved hoops. So if you want to play with one of the original hoops, you can reset that slot independently. Also if a saved hoop freezes as you are trying to adjust its effects

(doesn't happen often but has happened) then you don't need to lose all your other saved hoops to clear this one. Also you won't accidentally remove all of your saved hoops. There is another reset move you will learn later in this tutorial called a global reset - Global reset erases all changes you have made, including any saved hoops. Global reset puts the saved quivers back to original default. However, you can save new hoops over your old ones as many times as you like without any reset.

PRACTICE MOVEMENTS

Before doing the next signal move, please practice with another specific hoop in the quiet quiver (vertical orientation). This is the hoop that is one back flip from the segmented hoop (or two backflips from the default starting orange/yellow/red gradient color shifting hoop) in the quiet quiver.

Turn on the hoop in the quiet quiver (switch at the top, facing you, hoop vertical). If you are not in the first default hoop in that quiver, or you are not sure, do the quiver reset move, making sure the red arc completes.

Do two slow steady backflips. You will go past the segmented hoop, probably seeing just one or two segments lit, into a hoop that has a solid color all the way around it.

Do the LOCK move in this hoop and notice the colors change as you go through different orientations. Notice the blue color flash letting you know the hoop is now locked.

Do an isolation with this hoop and notice that it changes colors with the 6 orientations like the segmented hoop. Do the LOCK DISPLAY move so you can play freely with this hoop, and notice the blue confirmation signal to show the hoop is locked.

Explore slow movements with this hoop, doing isolations in both directions and slow flips, and getting familiar with the 6 basic orientations, and the ways you can go from one orientation or color to another. Those will be the basis of all the signal moves in the psi-ko-hoop.

When you are done with this hoop, do the LOCK move again to UNLOCK.

If you have trouble with any of the following signal moves, it would be good to go back to these two practice hoops in the quiet quiver and play with them for a while. See what patterns and trails and effects you can create with these two hoops, and notice speed, timing, position, vector and orientation. Do some signal moves just paying attention to the changing colors of the training hoops. Get familiar with the colors that identify what orientation you are in. Then when you do half-offs to change quivers, it will be more natural and effortless.

CHANGE THE COLORS OF THE DISPLAY PATTERN.

Tutorial video link: <http://youtu.be/YVCvQf3F7bI> intermediate_5_colorflips

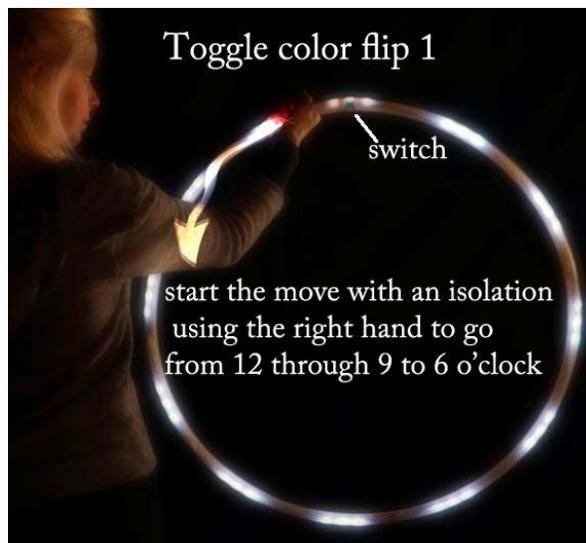
Note that if you get a red flash at the end of a signal move, it generally means that the hoop is locked and you need to do the UNLOCK move before it will recognize further signals.

Let's say you like the pattern of a certain hoop display, but you want to try out different colors and different color schemes (combinations of colors) in that same pattern....you need the move called:

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

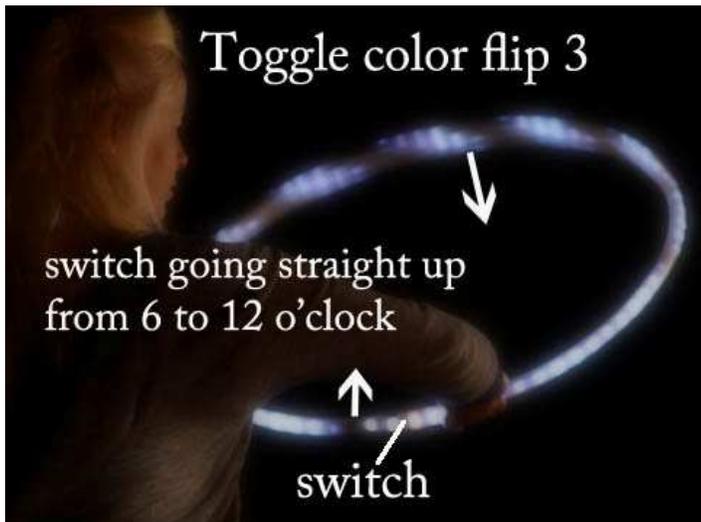
This will allow you to stay in the same pattern (layout, arrangement) and effect (the LEDs are fading or strobing or sequencing around etc), but with new colors. And now when you do a flip, the hoop will change color each flip but will stay in the same pattern and effect. If you get to one combination you really like, then you can LOCK that display and stay there for a while.

How do I do the **TOGGLE_COLOR_FLIP** MOVE?
It SAYS **RH ISOFLAP**. Grip the hoop with the right hand and start an isoflip. That is - Rotate the hoop counter-clockwise from 12 o'clock through 9 o'clock down to 6.





Then start to bring the hoop "straight up" from 6 o'clock to 12 o'clock.



(or you could say that the top of the hoop now falls away from you and down) but only go halfway with that move –



when the hoop is parallel to the ground,



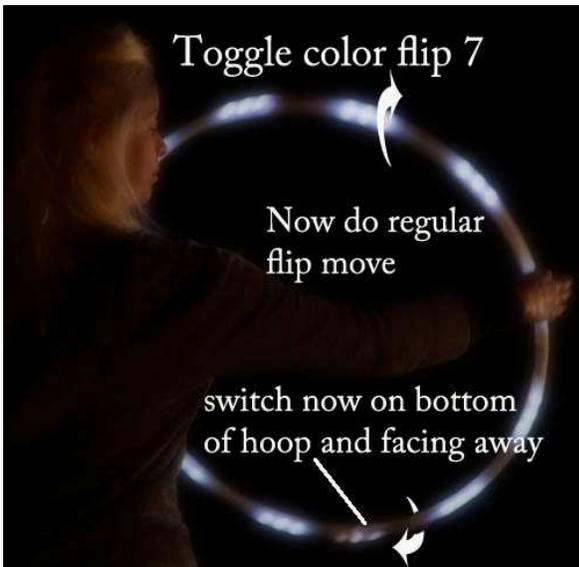
hold it there and turn it 180 degrees in either direction....one way will be easier, so use that way....



and then let the move complete by allowing the far side of the hoop to descend from horizontal to vertical.



That is an ISOFLAP (the horizontal flip part may visually be something like turning over a pancake or FLAP jack or opening a powder case in a make-up kit).



You can use two hands in this or any other signal move. In this case use the left hand to steady the hoop and guide it smoothly on its path.

Practice the RH ISOFLAP till you have it down easy, and get it right 100% of the time. Check out some pics and videos of this move. Certainly it won't take you long to discover how to do the ISOFLAP, and you will use it in several other signal moves.

When you have done the move correctly :**TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN**



You will see a confirmation solid yellow color for a second to let you know the hoop is now in toggle color flip mode. Now each time you flip, forwards or backwards, the hoop will change color schemes.

Note that the color schemes will appear differently in different displays – in a blue and white color scheme for example, one hoop display might be all blue or mostly blue, another hoop display might be half white and half blue, etc.

To toggle out of this mode you need to do the move again and you will get a solid white confirmation that you are now clear of the color flip. Now when you flip you will be back in navigation mode and each flip will take you to the next hoop. Or you could do the quiver reset move and that will clear the color flip as well.

THE SAVED QUIVERS or 3 PACK

Tutorial video link: At 9mins :36 <http://youtu.be/X6eLIGKd0hY> intermediate_7_quivers and orientations

The saved quiver is the hooping environment that you access by turning the hoop on at 3 o'clock (the switch facing you and in the middle of the right side of the hoop). You can call it the 3 pack cos its at 3 o'clock and has 3 quivers in it, or call it the save pack or saved quivers....There are some default hoops in these quivers, but as these hoops are also stored in other places in the psi-ko-hoop, don't worry about erasing them. You will also learn a global reset move later in this tutorial. The global reset puts the default saved hoops back (the ones the hoop came with when you got it). Also you can upload any of these hoops to your computer or device or to the cloud, use them for specific performances and share them with others if you like. (But this feature is still being implemented as of November 2014 so please check with us about this merlin@psihoops.com).

There are 3 quivers in the save pack, each quiver has three "hoops" in it. You can save any hoop you find, modify or compose...into one of the slots/positions in the saved packs.

The default hoops in the saved quivers are arranged to give you a small selection of the hoops that you can find in the other quivers, or create in compose mode. As you save your own hoops to the saved quivers, you will overwrite the default hoops, but you can always get the default hoops back again with a global reset move. Before you do a global reset you can save your psi-ko-hoop with all its current settings to your computer and then reload it at any time or send it to someone else to use or post it on the psi-ko-hoop web site for others to share. You will learn how to do this in the full tutorials later. Meanwhile just play, and get familiar.

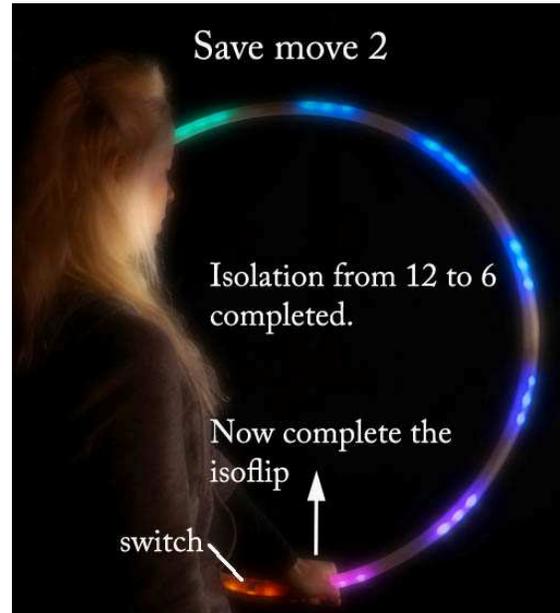
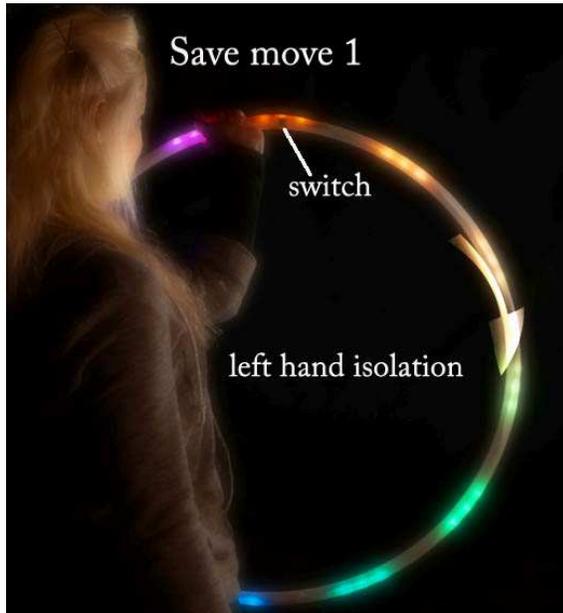
When you do a performance or practice, you may want several different known displays available in a certain order, and you can set that up in the saved quivers. If you want to have three variations of the same hoop, save them to the three slots in one of the saved quivers, perhaps each one with different colors or other variations. Or you could have 3 hoops that will flow together for a performance.

To flip between hoops in the saved quivers is the same as the flip in any other quiver. You can go backwards or forwards (by doing front or back flips). If you do four flips you will be back at the first hoop in that quiver.

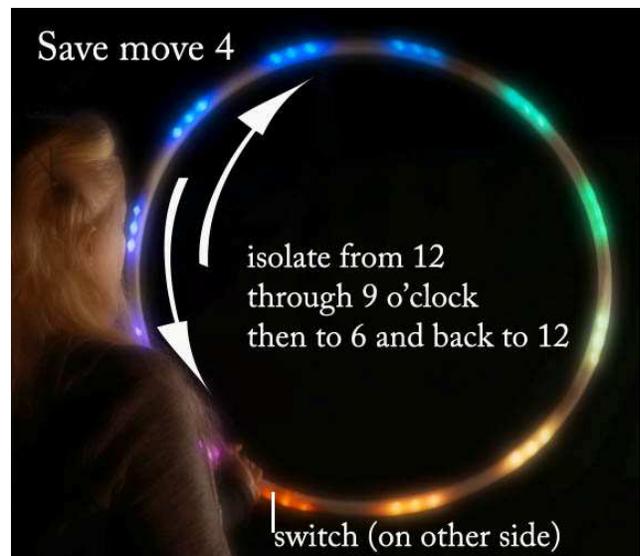
To flip out of that quiver and go between one quiver and another in the save pack, do the side flip. You will need to do 3 side flips to move from one quiver to the next. If you don't mind going forwards or backwards, and as there are only 3 quivers, it doesn't matter if you start with the switch at 9 o'clock or 3 o'clock or facing you or away from you. If you continue without pausing past 3 side-flips you should change quivers with each additional flip.

How to SAVE a hoop

The move for doing this is:
ISOFLIP, HALF-BACK.

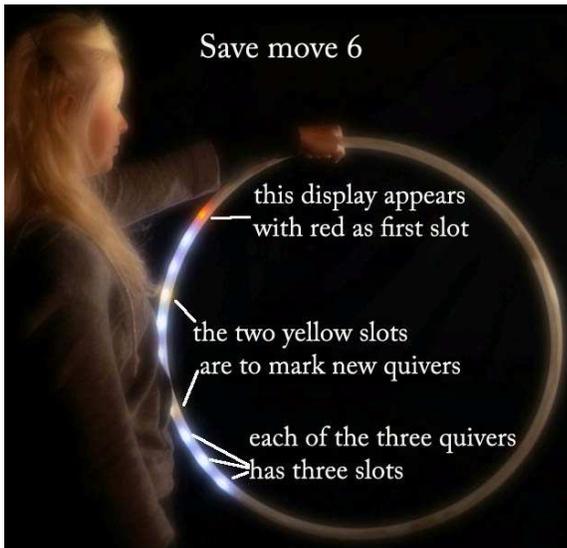


You already did the RH ISOFLIP, HALF-BACK..... to LOCK the display, and this signal is just the same move done with the other hand and in the other direction.



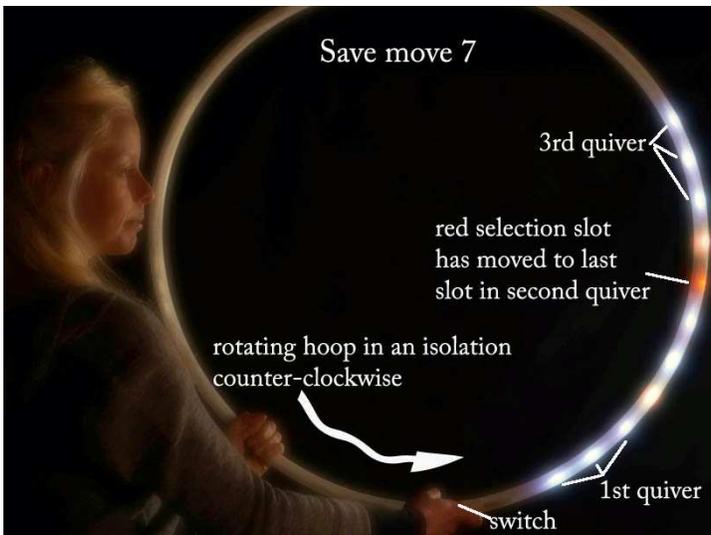


When you come to the end of this move, and have done it well enough that the hoop recognizes it, the hoop will flash greyish white,



and a row of lights will appear to the left of your left hand. At that point your left hand is holding the top of the hoop with the switch away from you.

Move that left hand in a smooth, slow, even isolation to the left, in the direction of the lights, and you will see the red light next to your hand move along a row of white and yellow lights. You may need to continue the isolation quite a ways to accomplish this. When this display is first activated, there will be a red light lit followed by two white lights, then a yellow light followed by three white lights and then a yellow followed by three more white.



The white lights are the locations of the saved slots in each quiver of three. The yellow light marks the end of one quiver and the start of another. So you have three quivers in the SAVED pack, with three hoops in each quiver, so a total of 9 possible saved hoops.



Once you have moved that red light to any new white spot that you select, (by doing a smooth and slow isolation in the direction of the lights) reverse the direction of your isolation



till the hoop flashes white.....

and the hoop you are trying to save will be stored at that location in the saved quivers. You can also "move" a hoop from one location in the saved quivers to another spot in that quiver or in the other 2 quivers...just open that hoop and then do the SAVE move with it, putting it in the new location that you have chosen. It will now be in both locations in the saved quivers. (In other words, you can over-write any number of times to any location in the saved quivers). You can then save another hoop to the old spot if you like.

Note that the isolation you do to select the slot in the saved quivers has to be very smooth without any jerks or bumps or reversals, so practice this a bit before you have some really cool and useful hoops saved. (In case your overwrite one of your favorites by mistake).

If you don't do a full power off, the hoop will remember the last slot that you used to save to, and offer that as the place to save your next hoop. This is so that when you are saving new versions of the same hoop as you play in compose mode or alter settings in other quivers, you can overwrite the hoop till you are finished making changes and saving. If you want to save a new hoop or a new version of the same hoop to the next slot in the save quivers, just advance the red dot one place (by moving your left hand in the direction of the red dot, which should be counterclockwise) and then lock it in by reversing the isolation .

NOTE: the function of saving your hoops to your computer or phone or the cloud etc, is currently under revision and should be ready early 2015.

Hoops in the saved quiver/3 pack are easy to access....useful when you are dancing with others or performing or want to practice using a favorite display, and not worry about how to access it. There are 3 quivers of 3 saved slots, giving you 9 hoops to save in the saved pack. As the psi-ko-hoop will also remember the last hoop you were using (with all its settings) in 3 of the other hooping environments, you can have another 3 saved hoops waiting for you. The last hoop used in those environments will be saved, and accessed by turning the psi-ko-hoop on again in any one of those specific orientations. You can LOCK any or all of those 3 hoops outside the saved quivers if you like. The flip moves wont then work in the quivers of the hoops you have locked, but you will be guaranteed to have known displays that you have selected. Some of those displays can be auto-cycling even though locked. So you have a total of 12 saved hoops possible if you are doing a dance or performance and don't want to be distracted by any complex navigation.

The suggestion here is to put some of your favorite hoops in the SAVED quiver. Then when you are under pressure of performance or whatever, just open the hoop in saved orientation (3 o'clock for the 3 pack of saved quivers) and you can navigate with front or back flips and side flips. That you should be able to do under any kind of pressure! You don't have to remember or do any other moves. Just become familiar with what order you have saved the hoops in, and how to access those most easily. Perhaps have one saved quiver of really mellow hoops in 3 different color schemes, or one color in three different patterns and effects, have one quiver that is best for isolations or your special style, and have one quiver of complex or random morphing hoops etc for maximum effect.

With a few simple guidelines and a couple hours practice, you will have access to an array of personalized hoop displays that are interactive and tailored to whatever mood/music/costume/intention that suits.

BRIGHTNESS CONTROL

Tutorial video link: http://youtu.be/fu0TtcwL_uc intermediate_6_brightness

There are several uses for this control. The first is obviously to make a brighter display, perhaps when there is too much ambient light or for the finale of a performance or just when you want to impress people (make sure you are wearing shades if you do this a lot!).

There again, in certain circumstances you might want a dimmer display – especially if you are working with steady LEDs that don't have strobing/sequencing effects and you are not going for

trails, but want the whole hoop to glow – then the dimmer setting might be more useful. Or when its pitch dark outside and you want some light in the hoop but are going to be hooping for a long time and just want some mellow vibe.

Another use of the brightness control is for parents to regulate the intensity of the light for their young children. If a kid is playing a whole lot with a psi-ko-hoop I would make sure that the displays were not too bright and disorienting. Some of the quivers like the quiet quiver and the second quiver in the 9 pack are specifically made with mellow hoops which can still be a lot of fun and possibly less stressful to the nervous system.

EXTENDING LIT TIME

A third use for brightness control is to save the batteries and **extend the lit time** of the hoop. We have not yet worked out the exact ratio of lit time in various different displays on the 3 different settings in the brightness control. But from dim to very bright, it would be roughly 4 times as long a lit time. Which would be important for all night play etc. The displays that use the most battery power are the steady white with all the LEDs lit. (Because white is made by mixing all three of the red/blue/green colors in each LEDs, each of them fully on, it uses the most juice.) So if you want to get maximum lit time use displays with the minimum of LEDs, and use the displays and settings that have slow strobing effects and no white in them, and also put the brightness on the dim setting.

Here is the move:

BRIGHTNESS CONTROL: RT hand ISOFLIP, then rt hand isolation all the way around beyond 3 o'clock.

Have the hoop upright with the switch at the top and facing you.

Start with the right hand holding the hoop next to the switch (not touching it)

The left hand is steadying the hoop. The right hand moves the hoop in a circle.

Do a half isolation from 12 o'clock through 9 o'clock to 6 o'clock at the bottom of the hoop.

Bring the right hand holding the bottom of the hoop up towards your face and on up to 12 o'clock

Immediately continue in a clockwise isolation through 3 o'clock down through 6 o'clock and around up towards 9 o'clock. The left hand is now not just steadying the hoop but is actually helping to move the hoop, so you are doing a 2 handed isolation.

When you get around 9 o'clock you will see the hoop blink/flash and then near the connector some orange lights will appear. These will be either one, two or three segments of two orange lights each. The rest of the hoop will be dark.

One segment of a pair of orange lights indicates the dim setting.

Continue to turn the hoop and two segments will go orange. This is the default normal setting.

Continue to turn the hoop and three segments will go orange. This is the boost/brightest setting.

Continue to slowly and steadily turn the hoops with no bumps and the one orange segment will reappear...etc

When you have the setting you want, reverse the direction of the isolation for a little, or bump the hoop, and you will see a whitish/pinkish flash and that means you have successfully selected that setting.

NOTE: The brightness setting move is a global setting and will affect all the hoops in the psikohoop.

The hoop will remember brightness settings, so once set you don't need to reset it when turning the hoop back on, and it will affect all quivers and orientations of the hoop. The green battery signal that appears when you turn the hoop ON or OFF or half off, will have the same orange segments to indicate the brightness setting. Notice this signal near the connector.

BITMAP QUIVER and the 9 PACK

Tutorial video link: <http://youtu.be/X6eLIGKd0hY> intermediate_7_quivers and orientations

Tutorial video link: <http://youtu.be/5LPzmAMMMhI> intermediate_8_navigation_use_of_hoops

This was somewhat covered in the beginning tutorial doc, and will be explored in more depth in later tutorials but at this point it would be worth applying your new skills with hoop signals and navigation to dip into these quivers again.

Try to discover what kinds of moves that each hoop works best with for you. Remember you can LOCK a hoop and play with it a while and then if you really want more time with it or feel you could perform well with it, then save it into one of the 9 slots in the save quiver.

The first hoop that appears in the 9 pack (9 o'clock orientation and used to have just 9 different quivers in it) is one with 2 sets of blue/white/red flashing lights and 2 dark segments in between those. If you are in another hoop, please use the reset move to go back to this hoop or navigate there with flips. It's the same navigation signal as in the saved quivers – you go from

one quiver to the next with side-flips....you need 3 consecutive smooth side flips to go to the next quiver and then if you don't pause, each consecutive side flip will advance one quiver.

Once you get familiar with the starting hoops in each quiver you will have an easier time identifying your location. Each quiver has a theme, and if you play in the 9 pack for a while you will get the feel of it.

HAVING YOUR OWN LOGO, PICTURE, WORD OR SYMBOL

If you want your own very simple LOGO or symbol, there is an extra space for this purpose. Either email us at Psihoops merlin@psihoops.com and let us know what you want, and we will try to produce it and install it for you. Or if you are a photoshop junkie, and computer savvy etc, then ask for instructions on how to upload your design into the hoop.

The logo or symbol has to be very simple and clear or it won't be recognizable in the hoop. The resolution at the moment is not high enough to render anything too involved, but you can see from the 16 examples already in your hoop, the kinds of things that would work.

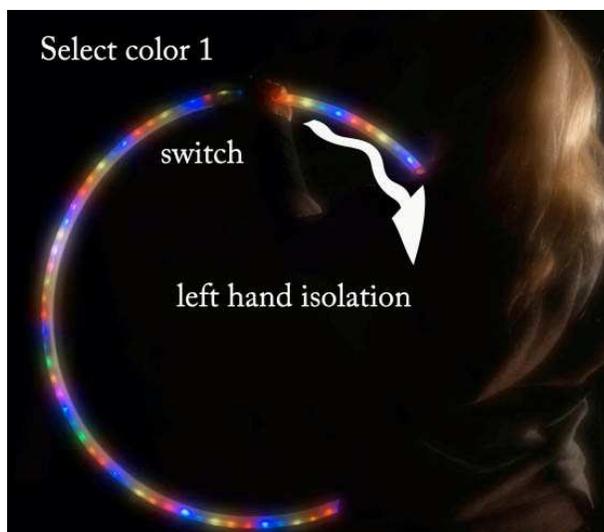
SELECT COLOR

Tutorial video link: <http://youtu.be/QTRBdV-j7dQ> intermediate_9_select_color

It is useful if you want to stay in a particular color scheme but vary the patterns of the lights and trails.

SELECT_COLOR = ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

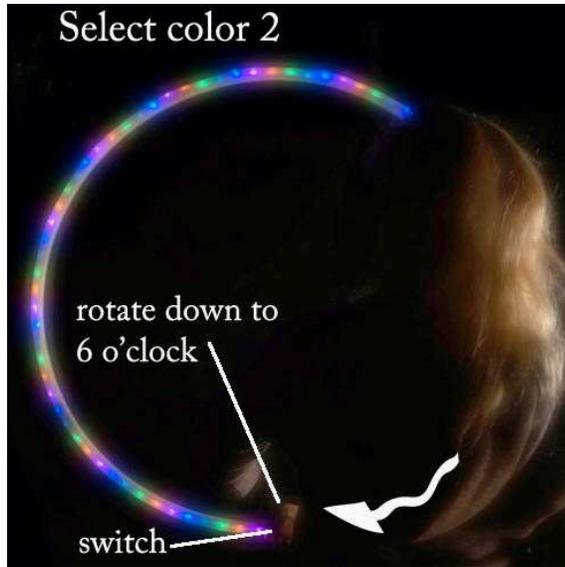
You already did the reverse/mirror image/other direction of this move



(TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN)

So this move is very similar. Just start with your left hand instead of your right one. .

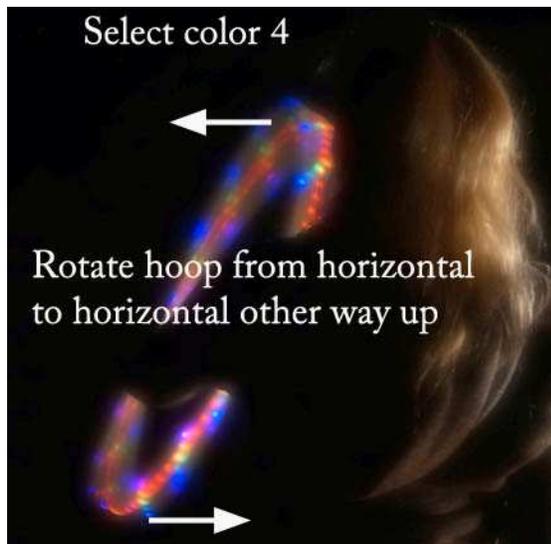
Grip the hoop with the left hand and start an isoflip.



First, rotate down to 6 o'clock



Before completing the last part of the isoflip however, the part where the hand goes "straight up" from 6 o'clock towards 12 o'clock,



you stop midway with the hoop parallel to the ground and then turn it 180 degrees in either direction....one way will be easier, so use that way....and then let the move complete by allowing the far side of the hoop to descend in a controlled way from horizontal to vertical.



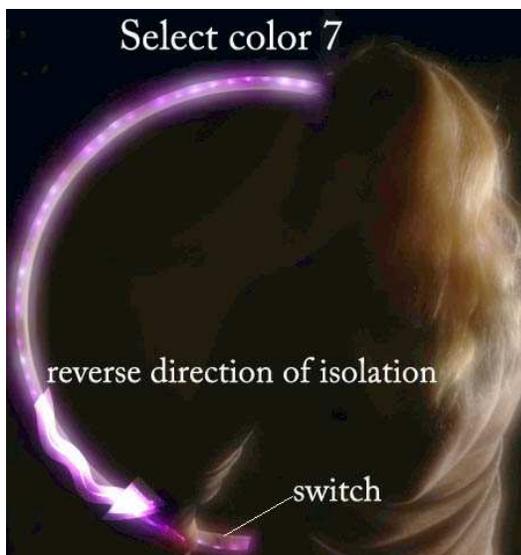
The hoop will flash a warm white to confirm the movements actually signaled the hoop and you are now in Merlin's Wheel.



Without making any other motion, start a slow rotation to the right clockwise, from 12 o'clock towards

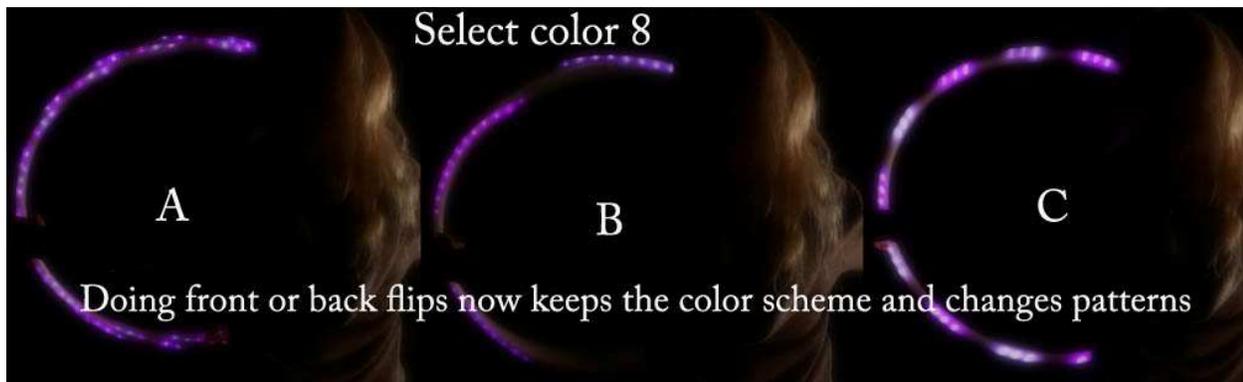
3 o'clock, and you will see the colors start changing...

you are going through many different possible color schemes (combinations of colors) and a series of single colors. The wheel selection should start in a rainbow scheme and then go to a white and then a white/yellow/red and then an aqua scheme and on through around 25 color schemes.



When you get to a color scheme you wish to use, reverse the rotation of the hoop, and it should blink white to confirm that you have selected that particular color.

Now you will stay in that color scheme even when you flip to a new pattern hoop. So you can have many different hoop displays in a quiver with a continuity of color.



If you miss the color scheme you want, you will unfortunately have to go all the way through the selections on the wheel till you come back to it. This may involve several rotations of the wheel. So if you miss the color scheme or if you select a color scheme you don't want, you may want to just do the select_color move again. That will then allow you to use Merlin's wheel to select a new color.

If you turn the hoop off and then back on in the same orientation, you will be back in the same color you selected, but if you flip the hoop forward or back the next display will be back in the default colors for each hoop in that quiver. So this is the easiest way to back out of "select color". Turn the hoop off (in any orientation) and then back on in the same hooping environment orientation you were in with color select. Or you can reset the quiver by turning the hoop off and back on again in the correct orientation, and then doing the psi-ko-shake reset move as described before.

If you are in "color select" and get to a hoop you like and want to stay in that hoop for a while, do the LOCK move:

LOCK DISPLAY: RH ISOFLIP, HALF-BACK

and/or if you want to put that hoop in the saved quiver (your 3 pack) do the SAVE move:

SAVE: ISOFLIP, HALF-BACK

Here is a way to select color in the random quiver –side flip to manual, do the hoop lock move, do the color select move (below), rotate wheel to desired color, reverse to select, unlock the hoop, leave in manual or side flip to auto again.

AUTOCYCLE HOOPS

Sometimes its great to let the hoops change on their own, and interact/play/express with them as they appear. With the color selected to a plain color or a color scheme, there will be a continuity as the patterns change.

Here is the move to do this: (its called toggle because if you have set the hoops to autocycle then the same move repeated will cause the autocycle to turn off).

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP

You have already done isoflips with the LOCK hoop move and the SAVE move. The autocycle move is just two right hand isoflips one after the other. The right hand starts grasping the top of the hoop just to the right of the connector, with the palm upwards. Once you complete one isoflip your palm will be downwards but just continue straight away to do the next isoflip. You will get a green confirmation when the hoop recognizes your move, and the hoops in the quiver will start to cycle. Try this in the quiet quiver.

First do a reset move in the quiet quiver so you are back in the default orange/reddish gradient hoop that changes colors with angle/inclination. (er....ya could say the hoop is inclined to change colors...hehe...sigh....I mean psi) Now do the color flip move you learned above:

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

Instead of flipping to change colors, do the autocycle move so now the hoop will automatically change colors:

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP

Now if you flip the hoop it will continue to autocycle colors but with each flip you will change hoops.

MORE EXACT CONTROL OF BPM

In the random quiver we described being able to use the flips to control rate of change of the displays, for example matching to the beats per minute (bpm) of the music. Here is a more exact way of setting BPM that works in all quivers. It's the same instructions as given later in this tutorial for the compose mode, but worth doing here first. So we can take the hoops that are autocycling in the quiet quiver, the 9 pack, the kix quiver or the saved quivers and make them shift at a very specific rate. Or we can take colors that are autocycling and make them shift at a specified rate. Or similarly with a sequencing hoop, we can make the sequence go around the hoop at a specific BPM.

So taking the examples above with the autocycling hoops, go back to the quiet quiver and reset it, if its not at default (by doing the quiver reset shake move). When the reset is successful the red arc will have travelled all the way around the hoop and the display will be that gradient red/yellow hoop. Flip to a recognizable patterned hoop in the quiet quiver, I like the ones that are 3, 4 or 5 front flips from the default – they have dark spaces between the lit LEDs and easy to see color changes

Do the color flip move:

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

You will get a yellow confirmation. Now when you flip the hoop you will be changing colors manually and keeping the same pattern.

Do the TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP

You will get a green confirmation and the colors will start cycling. Notice the speed of change.

Do the tap BPM move: TAP_BPM = ISOFLIP, ISOFLIP

Its the same move as the TOGGLE AUTO CYCLE = RH ISOFLIP, RH ISOFLIP..... but started and done with the other hand, the left hand. The left hand doesn't come off the hoop. It stays just to the right of the connector.

Grasp the hoop with the LEFT hand (palm up) with the switch UP and facing you... do a smooth rotation to the bottom (clockwise through 3 o'clock to 6 o'clock) and then go straight up to the top as in any isoflip, and then without taking your hand off the hoop repeat the move, (palm down to start) but going in the opposite direction (will be the only really possible or easy direction).

The hoop flashes pinkish/white and goes dim yellow. Its now ready for the tap:

Hold the hoop loosely at the connector area. Best to hold it lightly , for example with two fingers so its quite loose, or have it standing on the ground, hold with one hand and then tap the hoop with the other hand near to the connector. The taps should be gentle, distinct, clear and in rhythm with each other. Start with very gentle regular taps and vary the intensity of the tap until you signal the hoop. You will need at least three taps that have the same interval (for the hoop to recognize the BPM).

The interval is quite exact, so it may take several more taps to get two intervals of the exact same duration. Count to yourself and tap gently on the beat. If there is some music playing, start mentally or physically tapping the beat and then tap the hoop at least three times at that rhythm. The display will now change at that interval. Don't worry if you have to do 10 taps or even 20, you will eventually signal the hoop. When you signal the hoop successfully it will all flash white for a second and then the sequencing will be at that beat you tapped in. With longer intervals it's a challenge to keep the taps even....try with a stopwatch or metronome or every so many beats from the music.

Try first with around 120 BPM which is twice a second, this will be a fairly easy rhythm. If you cycle the colors too fast it will look like a slow strobe, which may not be the effect you want. Try out different beats and play with the hoop in front of a mirror. That will give you good feedback. The range will be from around once every four seconds to four times a second.

Now set the BPM for cycling between hoops. This will probably look better at a slower rate, something at once a second (the default autocycle) to 4 seconds. Try in the Kix quiver.

Open the hoop up to the Kix quiver (turn on with hoop horizontal and switch UP).

Do the autocycle move: TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP
Notice the hoop start to cycle.

Do the TAP BPM move: TAP_BPM = ISOFLIP, ISOFLIP
Set it to a different beat, perhaps slower than the default. Use a stopwatch or metronome or try every 2nd, 3rd or 4th beat of music, or count, whatever....

CHANGE THE RHYTHM OF A SEQUENCING HOOP

Tutorial video link: <http://youtu.be/aGfKRvFy9BI> intermediate_9h_BPM_saved_quiver

Lets get a hoop from the save quivers to try this.

Start the hoop with the switch facing you at 3 o'clock . The first hoop in the first quiver is a colored hoop with short segments going around in a circle. This hoop has movement responses and is fun to play with in isolations.

Do the tap BPM move: TAP_BPM = ISOFLIP, ISOFLIP

For this example with the sequencing hoop, tap around once a second (60 BPM) and the sequence will start cycling to that beat. Change the BPM by repeating the Tap BPM move and tapping a different beat . . .

When you have the hoop with the lights whirling around to a beat, then try setting a color flip mode

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

And notice the yellow confirmation. Now each time you flip the hoop it will change color.

Now you have the cycling sequence going to a beat that you set, and the color of the sequence changing each time you flip the hoop. That should give you plenty of opportunity to sync to the music and engage the audience or get great feedback from a mirror about your dance and movement qualities.

Now set these to automatically shift:

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP (like you would do the regular left hand but using the right hand) you get a green confirmation and the display starts to shift colors at the same beat.

SIMILAR HOOPS TO THE SEQUENCING ONE IN SAVED QUIVER

Go to the 9 pack (turn the hoop on with the switch at 9 o'clock. Reset that pack if you are not in the default starting bitmap quiver. (the reset move in the 9 pack resets all the quivers and returns you to the default 1st hoop in the 1st quiver) Do side flips – it will take three side flips to get to the next quiver, in which the 1st hoop is a segmented blue/white hoop like the one in the quiet quiver, and then will only take one side flip to get you to the next quiver where you will see an alternating strobing and steady rainbow hoop like the Cheshire cat – you are looking for the quiver after that, which has segments sequencing around the hoop.

Turn the switch to the top of the hoop and do front flips and pick any of these hoops to try the above BPM moves with control of either color or sequence speed or both. Note that if you start your moves with the autocycle move, then you will be autocycling through the hoops of that quiver and not staying in the same hoop.

If you want the beat to stay the same for the whole quiver, start with a TAP BPM move and then flip the hoop to advance to the next hoop display. This gives you a background display timed to the music or your chosen beat, and the ability to accent the moves with flips under your manual (or full body!) control.

WHAT THE HOOP REMEMBERS AND WHAT IT DOES NOT, WHAT SETTINGS AFFECT

These behaviors may appear random at first but were chosen for a reason! (maybe a bit psi-ko?). You need to do a bit of play/trial and error to get familiar with these, and then they will make some kind of sense. Also the explanations could no doubt be improved....let us know.

In all the quivers except random and compose the psi-ko-hoop will remember the last hoop you were using and when you go to that hooping environment (orientation) again, that is the hoop that will appear.

If you directly modify settings (by doing a signal move eg select color) of a hoop in the saved quiver the new settings will be remembered. This does not apply to the toggle color flip mode because then it would be impossible to get to the next hoop by flipping, so the toggle color flip is cleared when you save a hoop. You can temporarily toggle color flip on and off with any of the hoops in the saved quivers.

If you are in color flip mode then each flip will change the color of the same hoop and not advance you to the next hoop. To clear this you can do either the toggle color flip move again, or a quiver reset move, or a half-off . Color flip is NOT remembered, so the half off works to clear it.

Autocycle IS remembered, so if you are in the quiet quiver with the hoops autocycling and you turn the hoop off, then the next time you open the hoop in that orientation those hoops will be autocycling. If you do the color flip move and then autocycle that so the colors are automatically changing (either at default speed or set by you to a specific BPM) then you can save that hoop and it will keep those settings and remember them.

If you import a saved hoop into compose mode and then make changes to it, you have to save the new composed hoop again if you want to keep those changes. The hoop that was imported will still remain unchanged in the saved quiver.

Brightness is remembered and is a global setting, affecting all displays in the psi-ko-hoop. Most other settings affect just the one hoop or a quiver of hoops or a set of quivers in the one orientation. The green battery level display shows the brightness setting, and it will stay the same till you do the brightness move and change it or if you do a global reset.

If you set a BPM in one of the hoops in the saved quiver, the hoop remembers this.

If you lock a hoop and then do a half off or full off and come back to that quiver, the same hoop will appear and it will be stay LOCKED. To unlock it you need to do another lock move or quiver reset move.

If you set a quiver in the 9 pack to autocycle, it will remember that and also if you then side flip to another quiver in the 9 pack it will be autocycling (at the same speed). The quivers are distinct in the 9 pack, but a mode like autocycle and BPM will affect all the hoops.

In the saved pack each hoop is individual and you can apply settings to just that hoop, though if you set autocycle in the saved quivers it will go through all 9 hoops and not just the 3 in each quiver.

Select color in the 9 pack will apply to all the hoops in one quiver. It is not remembered with a half off or full off, except for the individual hoop you were last using in that quiver. When you go back to the 9 pack after a half off, the hoop will still be in the selected color but if you flip into another hoop you will be back to default colors. If you have locked that one hoop, a flip wont take you out of it, and the color will stay the way you previously selected.

So in general:

Brightness is the setting that affects the whole psikohoop. Other settings apply to either a whole orientation, a quiver, or an individual hoop.

In general the last hoop you were using will appear again when you go back to that orientation. (Doesn't apply to compose or random)

If you want a hoop to remember all its settings you can either LOCK it (but you wont be able to access other hoops in that orientation) or SAVE it. (Color flip wont be remembered, and if you lock a hoop that has color flip set, LOCK will disable color flip).

To clear settings, you can either do a toggle move again, or do a quiver reset, or turn the hoop half off and back on, or fully off and back on, or do a global reset move.

Autocycle colors will apply to just one hoop. Autocycle hoops applies to all hoops in one quiver, or in the saved pack it will go through all 9 hoops. BPM will apply to the whole orientation, or in the saved pack, just to the one hoop.

COMPOSE MODE

Tutorial video link: <http://youtu.be/7SA9EFHrIZE> intermediate_9a_compose_mode_overview1

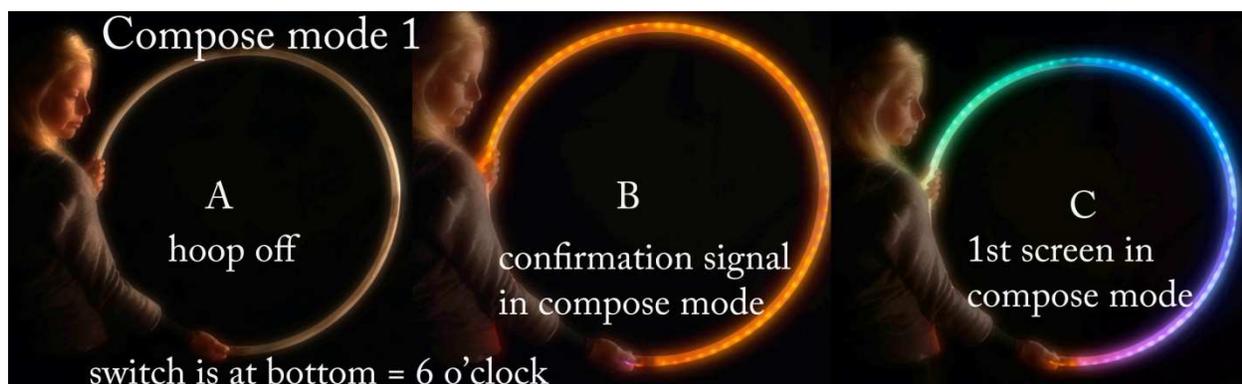
Compose mode is different from the other hooping environments/orientations. Compose mode has just one hoop in it, that you can compose with and change into a multitude of other hoops.

This intermediate level instruction will not cover all the functions and range of the Compose mode in the psi-ko-hoop, but it will get you started and perhaps give you enough to let you explore further on your own.

There are two main signal moves in compose mode –the flip and the wheel, so nothing new there. Compose mode has 8 “screens” each of which control a separate part of the display. You go from one screen to another with a flip move, forward or back. In a screen you use the wheel to go through a range of possibilities (color, pattern, LED effect, speed etc).

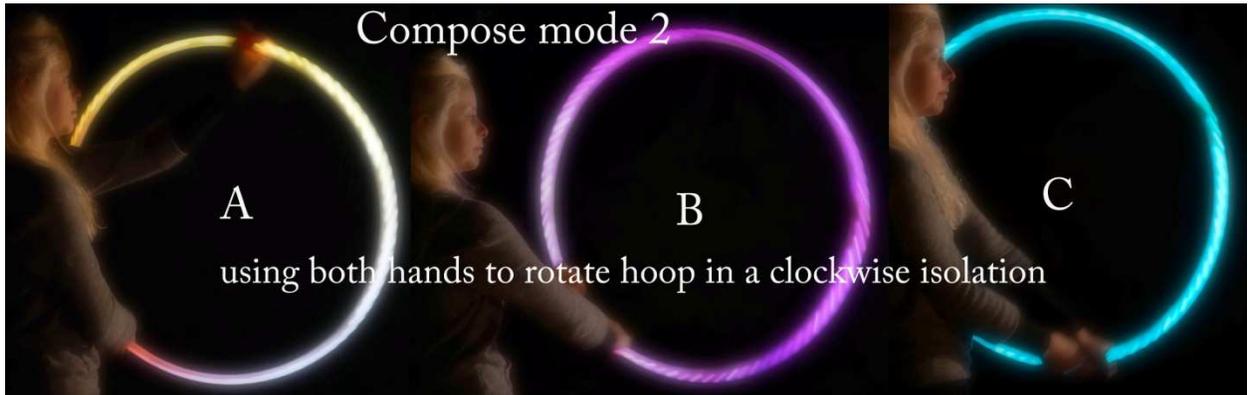
You can flip forward or back, going into one screen after, and in each screen you can turn the wheel in either direction, varying displays as you play and dance.

In compose mode you don’t lock in a selection by reversing the movement of the wheel, as you did in other orientations. The wheel can turn in either direction and you bring whatever is selected into the next screen or you hoop with whatever is selected until you change it with a wheel move.



Turn the hoop on with the switch at the bottom and facing you. You are now in COMPOSE mode. There will be solid filled all red confirmation signal that you are in compose mode, and then two very short red bars will flash on to show you are in the first screen of this mode –

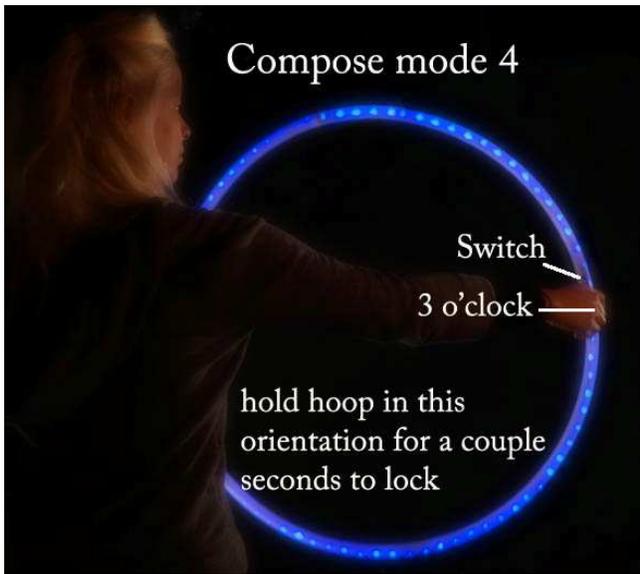
then a rainbow hoop will appear and if you rotate the wheel in either direction you will see the colors change.



The isolation move, or Merlin's wheel, is the basic method of selecting things in this mode. Compose mode always starts with a default rainbow hoop, and then you can adjust all the settings and displays with flips and turns, and literally turn this hoop into any other display.

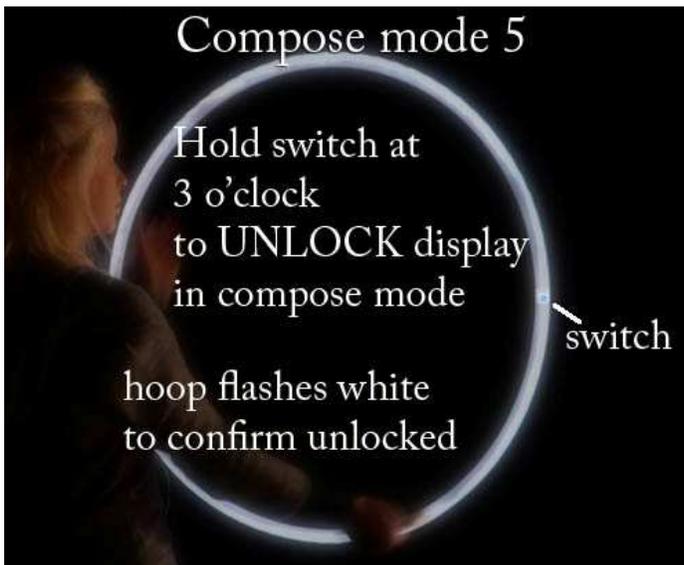


In compose mode flips will change "screens". The 1st screen is a color screen where turning the wheel changes colors. Two small segments of color (color bars) indicate what screen you are in. The first screen has red color bars and the second screen yellow and so on. The number of LEDs in the color bar signals increase through each screen. The second screen (2 yellow LEDs) is a segment screen where turning the wheel changes segment patterns.

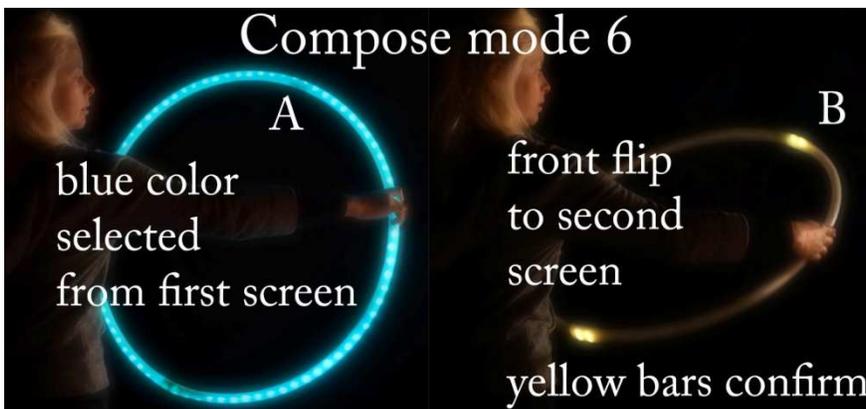


If you leave the switch facing you and at 3 o'clock for a few seconds you will see a blue flash, which means you LOCKED the hoop display. Wheel turns and flips are disabled and wont work.

The hoop has to be ABSOLUTELY STILL for this move to work (even a slight jitter from holding the hoop will make the signal difficult or unworkable)...so you might try standing the hoop on the floor with the switch at 3 o'clock if you have problems with this signal move. Also try varying the angle slightly from 2 to 4 o'clock to see what works best.

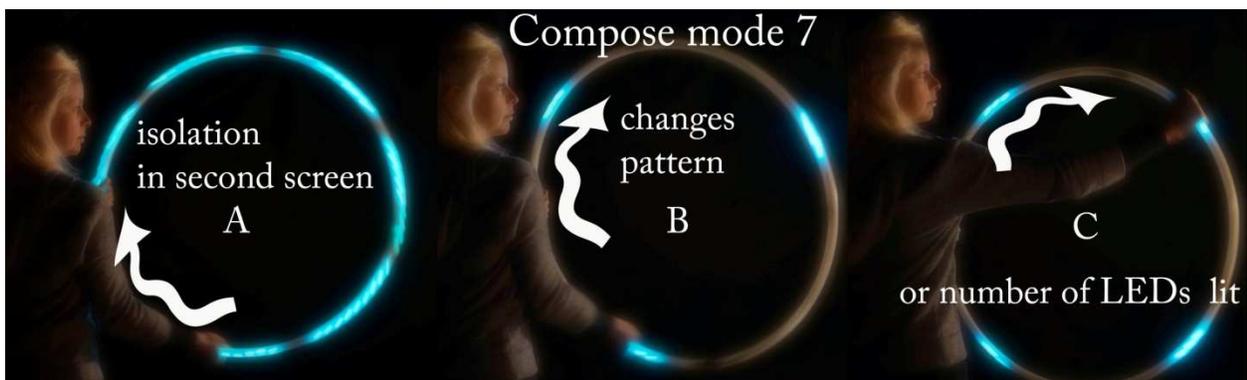


Leave the hoop in that orientation for another couple seconds, or come back to it later, and hold it there for over a couple seconds or so, and you will see a white flash, indicating the hoop is UNLOCKED. Now the wheel turns and flips will change the display and the screen.



In COMPOSE mode (and only in this mode) doing a flip will take you to another "screen" (a display where you can vary another set of parameters), and rotating the wheel in that screen will affect/select other aspects of the display. If you do a front flip from the original rainbow screen, you will get

a short yellow bar confirmation, and a wheel turn will now affect the segments.



You may have to turn the wheel through several revolutions to go through all the possibilities. Turning the wheel (an isolation) one way will take you through the selections in one direction, and reversing the wheel turn will take you back through the selections.

In the other 5 hooping environments/orientations, the wheel selection only operates in one direction, and if you reverse the wheel you select the current display, but in COMPOSE mode its more of a free-wheeling situation, and to select the current display just drop the hoop into the horizontal plane or just hoop with it, using any normal hoop movements (but staying away from slow isolations in the vertical plane and not pausing the hoop too long with the switch at 3 o'clock). If you start doing a slow isolation in the vertical plane you will start changing the current settings again, and if you leave the hoop with the switch at 3 o'clock for more than a second or so, you will LOCK and then UNLOCK the hoop. There is also a screen in compose mode that allows you to play freely with a hoop without affecting any settings or losing the hoop.

You can save any hoop from compose mode doing the regular save move. First flip to the white screen before doing the save move. Wheel turns do not do anything in the white screen, so signal moves work better from this screen.

You can import hoops from other orientations into compose mode and vary them.

Tutorial video link: http://youtu.be/-LaO1wGb_uk intermediate_9b_compose_mode_overview2

Here is the move to import other hoops into compose mode:

IMPORT HOOP INTO COMPOSE MODE / THE CUSTOMIZE MOVE: RH isoflip, turn hoop clockwise ¼ turn so your hand and the connector are now at 3 o'clock, side flip forward once or twice.

Lets try that move. Start the hoop in the vertical orientation of the quiet quiver. You are looking for the hoop that has 5 segments of blue and white (or red and white, depending on orientation). The quiet quiver has around 20 hoops in it and this hoop is 5 backflips from the default starting hoop and 15 front flips from that hoop. So either just flip till you find this hoop or do a reset move for the quiver if you are not in the default starting hoop – a red/orange/yellow gradient hoop - and then do 5 backflips . Of course you could pick any hoop

from any of the quivers to do the customize move, but start with this segmented hoop so these instructions make more sense.

Step 1: Do the CUSTOMIZE move – right hand starts at the top of the hoop next to the switch, holding the hoop from under the tubing, and goes counter clockwise to the bottom of the hoop in an isolation, then up toward you to the top again (the switch will now be facing away from you). Your right hand will now be on top of the tubing and ready to do a quarter turn clockwise (to the right, to 3 o'clock). Now the hoop is ready for a side flip. From that position just do the same as a front flip move (except the switch will be to your right). With one or more side flips you will get a pink/purple confirmation that you have signaled the hoop correctly and the two short red segments of the first screen in COMPOSE mode will appear. The color pattern of the hoop will have changed.

Step 2: You are now in the color screen so if you move the hoop in an isolation in either direction (the wheel move) you will see the colors vary. But try going to the left or counter clockwise toward 9 o'clock and stop when you have a hoop with 5 rainbows. The rainbows should be red in the middle and going out on each side through the colors to purple. Hoop with this.

At any point if you get lost in these instructions on how to make specific hoops in the compose mode, you can reverse your steps with the wheel and flips or you can do a half-off in the quiet quiver orientation and the same hoop should appear for you to start over in compose mode by re-doing the **CUSTOMIZE move: RH isoflip, turn hoop clockwise ¼ turn so your hand and the connector are now at 3 o'clock, side flip forward once or twice.**

Step 3: flip the hoop forward into the segment screen and notice the short yellow bars to confirm.

Do a couple isolations of the wheel in a clockwise direction until the display changes to 3 large rainbow segments. Play with this hoop.



Step4: flip the hoop forward into the effect screen and notice the green bars. Rotate the wheel through a fast fade into a strobe (colors are all the same at each instant but cycling through the rainbow all together) and then into a sequencing strobe (you see rainbows but they are flickering and going around. Play with this hoop and notice the effects and how you can move it to best advantage.

Step 5: side flip in the same green effect screen and get a light pink confirmation and now you are targeting the dark spaces in between the segments you had lit in the first 4 steps. Play with each hoop as you change the display until you find a display you would like to stay in.

NOTES ON NAVIGATION - If you find it difficult to keep the settings you are selecting with the wheel, try dipping the hoop down to horizontal before you turn it to the correct position for a front flip or side flip and then bring it up to vertical.

If the whole hoop turns blue for a second, you have locked it by holding it at 3 o'clock for more than a couple seconds. To unlock it, hold it very still in the 3 o'clock vertical orientation till the hoop flashes white. Its now unlocked again.

When you are doing back flips or front flips to change screens, you may only need to do half flips and as soon as you see the small bar color indicators you can stop the flip or reverse it a little and go into the wheel

Step 6: do back flips through yellow into red bars (the color screen) and use the wheel to change the color scheme of the pattern you now have. You can go into any of the screens you have already visited and make changes to the hoop as you go...after a while you might start making too many changes that conflict with each other (like mixing paints till everything turns brown) so its time to start over. In that case do a half off with the hoop in the vertical orientation and then the customize move again to get back to compose mode with the segmented hoop.

THE CUSTOMIZE MOVE: RH isoflip, turn hoop clockwise $\frac{1}{4}$ turn so your hand and the connector are now at 3 o'clock, side flip forward once or twice.

Step 7: If the hoop still has some definition and clarity, flip into the purple screen and immediately go into a side flip and then a wheel. Interesting things can happen.

Tutorial video link: <http://youtu.be/wakSkfsN7N4> intermediate_9c_compose_mode_sideflips

There are a huge variety of controls in COMPOSE mode, all involving a wheel and/or a flip, but at this stage in compose mode it would be good to just play with rotations and flips and accept what comes up without worrying about what exactly you are doing. To clear the hoop and start again in this mode, turn the hoop half OFF and back ON with the switch at the bottom and facing you, (that will start over from the default rainbow hoop of compose mode) or back into the quiver from which you were importing/customizing the hoop, and bring that hoop back to compose mode.

As usual, you can save any hoop that you create, putting it in one of the saved quivers.

SAVE = ISOFLIP, HALF-BACK

Remember to choose your save slot carefully, so you don't overwrite some other favorite by mistake.

As you get more familiar with the compose mode you will quickly be able to re-create any hoop, so after a short while of practice with this mode you may feel comfortable enough to not worry about saving. Each step in the creation process is intended to produce a beautiful hoop. If you like you can LOCK and play with any hoop, and UNLOCK again to continue the creative process. You don't actually even have to LOCK the hoop to play with it, because as long as you don't do slow isolations or flips you will keep the settings you have, and if you start an isolation and that affects the display in a way you don't like, then reverse the isolation and it will take you back.

Varying the color display in compose mode

The color wheel in the first screen of the compose mode has another signal move which is accessed with a side flip. It varies the way the colors are displayed, either in a continuous gradient, or split up into 2 sections of mirror images, or small gradients within each segment. You may need to front flip and back flip between the color wheel and the segment wheel in order to see all these combinations.

Try this:

Turn the hoop on with the switch at the bottom and facing you. You will get a red confirmation and then a rainbow hoop will appear. There is one rainbow going all the way around the hoop. Do a side-flip with the switch facing you and at 9 o'clock. There will be a light pink confirmation that you can now use the wheel to vary this display. If you turn the wheel clockwise you will see that you get a mirror image display with two rainbows in the hoop, and if you go further with the wheel you will get a solid red display. These are the four possibilities:

The first one is no gradient, e.g. a solid color...with the RICA display this will be red.

The next one is a linear gradient around the hoop...this is the default hoop in the compose mode.

The next one is a reflected gradient around the hoop....so you get two gradients in mirror image.

The final one goes through a gradient for each segment, the default is just one segment, so this one looks like a linear gradient. If you flip forward to set a segment pattern, say a few large segments, then come back you'll see a huge difference between linear gradient and segment gradients.

Turn the hoop off and on again in compose mode to reset it. Stay in the default rainbow color scheme. Remember that you can tilt the hoop to near horizontal to turn it so the switch will be at the top and facing you when you bring the hoop to vertical again – this prevents the wheel turn from changing the colors as you reposition the hoop for a flip.

Do a front flip and see the confirmation 2 short yellow bars.

Turn the wheel clockwise/ to the right/ towards 3 o'clock, being aware of the 3 o'clock LOCK/UNLOCK signals, so go a little faster through that orientation.

Go through a display with dark spaces between each LED and then through one with a repeating pattern of 2 LEDs lit and then a dark space, to the next display with 3 big segments of lit LEDs. You will see the rainbow split into three parts (one segment mostly in the reds, one in the greens and one in the blues)

Do a backflip with this hoop. (You may need to navigate to 12 O'clock by dipping the hoop to horizontal and then turning it and raising it to vertical at 12 o'clock). You will get 2 short red bars to confirm you are in color wheel. Turn the wheel by dipping down and back so that the switch is now facing you at 9 o'clock (left side)

Do a side-flip and see the light pink confirmation. As you practice you will be able to navigate with the switch in different orientations and facing away from you as well, but when you start its better to always go back to the switch facing you and the simple clock face to orient.

Rotate the wheel to the display where there are now 3 smaller complete rainbows. The choices as you side flip are 1/regular display of a continuous gradient 2/reflected gradient where you will see 2 colors in each segment 3/individual rainbows or gradients in each segment 4/each segment a solid color – red in this example.

Experiment with other combinations of color schemes and segments.

GLOBAL RESET

If the whole psi-ko-hoop starts to act glitchy, or you want to return everything to the original settings, there is a move done from the compose mode orientation that will do a global reset.

You will lose your saved hoops however, as the save quivers will also go back to their original settings. There is a way to download your saved hoops and all your settings to your computer or the cloud etc, but that wont be covered in this tutorial. If you need to do this and you are somewhat techy, then email us at merlin@psihoops.com

If the program seems frozen or the hoop is glitch, the first thing to try would be a hard reset. This will NOT remove your settings or saved hoops. For this hard reset it doesn't matter what orientation the hoop is at. Hold the button down and keep holding it. You will see the hoop go through its start up sequence (showing the battery indicator and the orientation signal and then it will go through its power down sequence and then turn off – at this point continue to hold the button down for ten seconds, count one thousand and one, one thousand and two etc fairly slowly, up to ten and then release the button. The hoop should start up. If this has not handled your issue then do the global reset. Also if you just want to return the psikohoop to its default settings and default saved quivers, then just do the global reset and not the hard reset.

Open the psi-ko-hoop through the Compose mode (6 o'clock) and as the solid red indicator light appears, do the global reset move:

GLOBAL RESET. IN COMPOSE MODE ORIENTATION - ¼ TURN ISOLATION CW (CLOCKWISE) FROM 6 TO 9 O'CLOCK AND BACK, THEN REPEAT ¼ TURN ISOLATION CW FROM 6 TO 9 AND BACK

Starting with the switch facing you and at the bottom of the hoop, (at 6 o'clock) turn the hoop ON and wait one second. Then start an isolation to the left (clockwise) and go up to 9 o'clock and then back to 6 o'clock. Repeat this move. You will then see the hoop start to fill with a red light. The red light will start to flash as it goes around, to warn you this is a key moment, and there is no undoing the reset. If you decide to abort the reset, all you have to do is drop the hoop from vertical to horizontal before the light gets all the way around the hoop.

It is good to practice this move before you have too many favorite hoops in your saved quivers.

Once the upload function to a computer is available (early 2015) then you can save your hoops with all settings and all saved hoops to your computer and download back at a future date, and you might want to do this each time before doing a global reset.

PLAYING WITH STROBE SPEEDS and DIFFERENT SCREENS IN COMPOSE MODE

NOTE: This will be MUCH easier to do in a dark room with a large mirror (or at night you can use the reflection of a window). It will be almost impossible to do this with lots of ambient light and no mirror. Staring at strobes from a short distance is disorienting at best. Another reason to use a mirror.

WARNING – if you are sensitive to strobes and have any tendency to seizures or epilepsy, do NOT do this exploration.

Also will be easier to see certain things (but perhaps harder on the nervous system) if you set the hoop to brightest: **RT hand ISOFLIP, then continue the rt hand isolation all the way around beyond 3 o'clock**. There are 3 brightness settings and to get the brightest you want to reverse the isolation/wheel turn when you see 3 pairs of orange lights near the connector area of the hoop. (1 pair is dim/battery save, 2 pairs is normal brightness and 3 pairs is boost/max brightness).

Try to look in the mirror and not directly at the hoop itself.

Open the hoop in compose mode.

Accept the rainbow colors and flip to the green screen (two front flips). Actually you can do one and a half flips to get to the green screen and when you see the green indicators, reverse the flip back to vertical.

You want a color scheme that has several colors in it, so don't use white or a solid color at this point. Remember you can dip the hoop and turn till the button is opposite you and then raise the hoop to vertical to prevent the isolation/wheel turn from changing values.

Do a clockwise wheel turn in the green screen. You will go past a fading display (may look steady at a brief glance because the fade is slow) into a strobe/flashing display. Take this and front flip once into the blue screen. Do a clockwise wheel turn about two complete revolutions till you see the strobe change speeds down to slow. There will be a very noticeable change of speed from flickering fast to flashing slow. Reverse the direction of the wheel slightly to go back to the fastest strobe just before the slow one.

Wave the hoop up and down to see the effects of the strobe, and also spin it around your wrist. You may need to do this many times, checking after rotating the wheel, to see how the effects have changed. If you wave the hoop up and down and you see the screen change (2 short segments of green or purple) then rotate the switch a bit so you aren't signaling a flip move. You should be able to do a fast spin around the wrist without signaling a wheel turn, but this may take a bit of practice, especially getting into and out of the spin. Going from an isolation to a spin around the wrist has been called an isopop or isobreak depending if you reverse direction from the isolation into the spin. You can find examples on youtube.

Remember that if you see the hoop go blue for an instant it means you have held the switch at 3 o'clock and locked the display. Continue to hold it at 3 o'clock and the white flash will indicate its no longer locked.

In the blue screen you have now selected a fast strobe. Side flip once and notice the light pink confirmation signal. Rotating the wheel will now change how long the lights are ON and OFF within the strobing pattern. Further wheel rotation will also access very slow strobe options, where the hoop is dark for a couple seconds and then has a brief flash. Turn the wheel slowly in one direction or the other, and do isopops every quarter turn to see how you have changed the display. When you are in the right selection section of wheel turns you should see multiple hoops appear in the mirror. You are looking to have multiple hoops but also to have the hoops appear as thinnest lines possible when you spin the hoop. As you change the length of time that the lights are ON in each strobe pulse, you will vary the width of the trails. Look for the shortest trails you can make, and you should have around 3 to 6 hoops appearing in space as you spin around your hand.

NOTE: If you get lost at any point and things are not working as you think they should, do a half off with the switch at the bottom of the hoop and you will be back in the default rainbow display and you can start over, going to the green effects screen and then the blue "effect speeds" screen.

Now without turning the wheel slowly in the vertical plane (so you don't change the settings) bring the switch up to the default position (facing you at the top of the hoop) and back flip to the color screen, which should be one and a half flips back, and it will show the 2 red dots as

confirmation. Turn the wheel clockwise to go through a variety of color schemes (turning the wheel counter clockwise is fine as well but you will get a set of single colored schemes and they wont work so well for this exercise). Pick any color scheme you like, you can always go back and change it again.

Front flip once to the segment screen (yellow confirmation bars). Now use Merlin's wheel to change the lit segments, and each time you notice a change, do an isopop to check it out and then back to the wheel to continue the selections. Go all the way around several times till you get back to the first display you had (whole thin multiple hoops). Then go around some more to your current favorite.

If you feel like it, at this point you can backflip again to the color schemes and check out the new pattern in some different color schemes.

Then go back to the yellow segment screen and see what is going on in the different segment patterns.

If you compose a hoop display that is stellar, then save it. Go to the white screen (by flipping backwards or forwards through the screens) and then do the save move: **ISOFLIP, HALF-BACK.**

And save it to a spot in those quivers. Then when you have done more of this tutorial you can import that hoop back into compose mode and play in some other screens. The "add effects: purple screen will give you some very interesting hoops based on the above.

Start over again to explore the super strobes, which are on the second side flip in the blue screen. Super strobes are very fast strobes with no interval/dark time between the colors flashing. They tend to look flickering white at rest and then leave the colored trails when moving. As you rotate the wheel on this second side flip of the blue screen, you will get to various different settings of super strobe. Check them out with spinning around the wrist etc, in front of a mirror. Try different color schemes by flipping back to the red screen.

A good hoop to explore super strobe colors is the segmented hoop in the quiet quiver (5 back from the default hoop) and import that into compose mode, or make a similar segmented hoop starting from the default rainbow hoop in compose mode. Once you have a super strobe, then go back to the color screen and see the effect of different colors in that pattern (merlin's wheel in the color screen with isopops perhaps) and varying the segment patterns in the yellow screen.

Blue screen overview:

- 1) effects speed...works for fades, for strobes and for sequencing around the hoop
- 2) 1 side flip (only when set to strobe) = strobe on/off time, very slow strobe options
- 3) 2 side flips (only when set to strobe) = super strobe

CREATING A CHESHIRE CAT in compose mode

Tutorial video link: <http://youtu.be/9zoFd9wduCU> intermediate9d_compose mode_cheshire-cat

Hey we're not in Kansas anymore, Alice! The Cheshire cat is one of the names you will encounter in the more advanced descriptions of the psi-ko-hoop.

Open up the hoop in **compose mode**. (Switch the hoop on with the switch facing you and at the bottom of the hoop). You will see a red circle confirmation of being in Compose mode and a short red bar follows that to indicate you are in color wheel screen.

Keep the rainbow color scheme for this example and front flip to the segment selection screen (2 yellow bars, segment select, second screen).

Rotate the wheel clockwise to get a display where there are alternating lit and dark spaces. It will be the first change of display so wont require much turning.

Front flip to the effect selection screen (2 green bars). Rotate the wheel till you get a strobing effect on the lit LEDs

Side flip to get secondary effects (solid light pink confirmation) and rotate the wheel to light up the remaining LEDs (like having a second circuit of lights) – use either steady or fading settings for this circuit

Back-flip to the red bar (color wheel) and rotate the wheel counter-clockwise through various color scheme. (counter clockwise will get you to more suitable color schemes for the Cheshire cat) Pick a color scheme that has more than one color.

Flip into the 5th screen blue bars effect speed Use the wheel to vary the strobe speed. Play with this hoop.

Flip into the 6th screen (purple bars). Add the disappearing smile effect. Rotate the wheel and keep bumping the hoop as you rotate till you see the lights disappear in an arc (in proportion to the speed and force of your bump) Play with controlling the lit arc perhaps in time to the music. To clear the effects of this screen, do two side-flips (pink confirmations).

THE SCREENS IN COMPOSE MODE

To give you an overview of the screens and their short color bar indicators.

As you enter a screen you will get 2 colored bars to help you navigate - they go like this:

- 1st screen....red...color select.....side flip =gradients
- 2nd screen...yellow...segment select.....side flip = more segment selections
- 3rd screen....green....LED effects..... side flip = second virtual circuit effects
- 4th screen....aqua...sequence segments....side flip = # sequence segments
- 5th screen....blue...effect speed.....side flip = strobe timing2 side flips = super-strobe
- 6th screen....purple...arc positions.....side flip = add more effects
- 7th screen...pink...movement responses...side flip= gives a second side display
- 8th screen...white....no effects (with wheel turns). Signal moves work (like save, lock, toggle).

The purple 6th screen which controls the arcs that are lit or dark etc, may be a bit confusing to back out of or clear the effects, so a double side flip will clear this screen.

A major function of the 8th screen, (2 white bars) – is to allow you to play freely with a hoop without worrying about isolations changing the display, and to act as a stepping stone to saving the hoop.

Of course from the white screen the hoop will still change screens if you do a flip, but you can always reverse that back into the white screen, or LOCK the display if you want to stay with the hoop settings you have composed.

In the white screen you can also use the other signal moves from the other orientations - like, toggle color, autcycle, set BPM and so forth. In this white screen the hoop will recognize those signal moves.

CREATING A SIMPLE FADING HOOP IN COMPOSE MODE

Turn the hoop ON with switch at bottom and facing you.

Accept the default RICA hoop and front flip twice to the EFFECTS screen (green bar). Rotate Merlin's wheel clockwise till the display goes all one color and starts to fade.

If you want to change the speed of the fade, front flip the hoop to the blue bars (the third screen - EFFECT SPEED screen) and rotate the hoop till the fade is pulsing in a very fast fade. Go slightly beyond that and you will be in a very slow fade that you have to sit and watch for a while to make sure its fading. This could be a very subtle effect as you hoop, or for battery wasting mood lighting, using the hoop as a light.

MAKE A CRAZY CURVED LINE DOUBLE HELIX HOOP

<http://youtu.be/oWDbqKdocTA> intermediate_9e_compose_mode_crazy

Definitely need to be in a dark room with a large mirror to navigate to this one.

Open compose mode (switch at bottom and facing you, red circle indicator, red bar)

Front flip to yellow bar (segments).

Rotate wheel counter clock-wise several times (Go past the displays that have a lot of white in them(if you started in the default RICA display), till you have a display with a dozen segments of 3 or 4 lit LEDs separated by very large spaces. First you come to a single segment, then 2,4,6 and then 12.

Front flip to purple bar and side flip (light pink confirmation) to "add effects" screen

Rotate wheel counter-clockwise, waving the hoop up and down every so often to check the trails. You are looking for a display that is pulsing, filling the whole hoop, but also alternating directions, left/right/left/right. You will see the trails seeming to go in both directions as you wave the hoop.

Back-flip to the yellow bar (segments) and rotate the wheel clockwise several times, checking the trails as you go...you will see dotted displays and then start seeing crazy curves and double helixes. Its not a hallucination, don't worry! It's a pis-ko-kinetic effect....

You can then back flip to red/color wheel and change color schemes, flip forward to white bar. You can save the hoop.

Go into the pink bar(movement response) screen and side flip once to the yellow confirmation and then back to the white bar and each time you side flip it now you will get to a second side of the hoop with its own color display.

Trails.....displays that fade out as they move

Definitely need to be in a dark room with a large mirror to navigate to this one.

This will start in the same way as the double helix hoop above

Open compose mode (switch at bottom and facing you, red circle indicator, red bar)

Front flip to yellow bar (segments).

Rotate wheel counter clock-wise several times (Go past the displays that have a lot of white in them(if you started in the default RICA display), till you have a display with a dozen segments of 3 or 4 lit LEDs separated by very large spaces. First you come to a single segment, then 2,4, and select the 6.

Front flip to purple bar and side flip to “add effects” screen

Rotate wheel counter-clockwise. Right after the pulsing, filled display that you selected in the previous tutorial, is a slowly sequencing set of segments that fade out as they move.

Flip to the red bar (could be a front or back flip) and then rotate the wheel selection to a white display, or any other color scheme you like. (Perhaps a multicolored scheme is best for this demo)

Front flip to the yellow bar and rotate the wheel to see the effect in different segment patterns.

Choose a pattern with three large segments

Front flip to the EFFECTS screen (green bar) and rotate Merlin’s wheel to the sequence effect.

Side-flip with this and see various displays.

Continue to dance/play/perform/practice/interact with the displays and use various other flips and wheels selections.

MAKE FAIRY LIGHTS

Tutorial video link: <http://youtu.be/BQW6PNGzZpo> intermediate9f_compose_mode_fairy-lights

Open compose mode (switch at bottom and facing you, red circle indicator for compose mode, then red bars for color screen)

Circle counter clockwise to select first color scheme, a purple, pink and yellow

Front flip into yellow bar (segment screen) and rotate counter-clockwise through quite a few complete turns of the wheel to a display with individual LEDs separated by large dark spaces.

You will need to make perhaps 20 wheel turns (exercise and isolation practice?) past the displays with 3 lights to each segment and then 2 lights to a segment to the one light alone in each segment. Pick a display with around 6 lit LEDs

Front flip into green bar (effects screen) and rotate till the LEDs are strobing
Front flip into the blue bar (effect speed) and then do two side flips (make sure you see the light pink indicator appear twice). Now rotate the hoop till you see the lights begin to twinkle (they will be dimmer, and if you rotate too far, they will disappear and then with further rotation come back brighter. If you get to this point, then reverse the rotation till you are back in the twinkle zone)

Front flip to the purple bar and do a side flip and rotate to see a variety of effects with the fairy lights.

If you find a pattern you like you can front flip a couple times to the red bar and change colors with the wheel, back and forth with reversals, either in isolations or hooping.

CHANGE FROM FAIRY LIGHTS TO DRAGONFLY

With the display above, front flip to the blue bar (effect speed), side flip into superstrobe and rotate the wheel till the individual LEDs go white or pastel. Try doing a coin spin move on the floor with these, or any move that involves repetitive movement.

Backflip to the red bar and change color schemes with the wheel.

Front flip to purple bar and side flip to add effects. Use the wheel to produce shifted dragonfly patterns that respond to isolations in interesting ways.

COMPOSE MODE DISPLAYS CHANGE TO THE BEAT OF THE MUSIC

Tutorial video link: <http://youtu.be/B44o9A8ypEQ> intermediate_9g_compose_mode_BPM

Another function for the white screen, **auto-color flip and auto-color cycle**:

Once you have composed a hoop in COMPOSE mode or imported it from another quiver, you can bring it into the white screen and make it color flip under manual control, or auto color cycle with a beat. Purpose of bringing it into the white screen of compose mode is so that when you do regular hoop signals you don't flip into another hoop. But you could also do the same set of moves in four of the other quivers, without bringing the hoop into compose mode, if you don't need to modify the original hoop.

We already went over how to set BPM in other quivers but lets do it again in compose mode:

Open up compose mode to default RICA.

Side flip and rotate wheel to make the display mirrored (two rainbows)

Front flip to yellow bar (segments) and rotate clockwise a couple times to get multiple segments of 2 lit LEDs alternating with dark spaces.

Front flip to green bar (effects) and wheel till you get a segment flowing around the hoop.

Side flip to light pink confirmation and wheel till you have the original display of fading multiple segments in the background, as well as the sequence going around

Front flip to aqua and rotate till you have three segments of sequencing lights flowing through a fading set of LEDs.

Front flip all the way into the white screen.

Do the color flip move:

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

You can try front or back-flipping the hoop now to see different color schemes.

Now set these to automatically shift:

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP (like you would do the regular left hand but using the right hand) you get a green confirmation and the display starts to shift colors quite fast, around 70 beats a minute.

If you want the shift to be to a particular beat:

TAP_BPM = ISOFLIP, ISOFLIP (hand stays on hoop, these are left hand isoflips)

Its the same move as the TOGGLE AUTO CYCLE = RH ISOFLIP, RH ISOFLIP..... but started with the other hand, the left hand.

Grasp the hoop with the LEFT hand with the switch UP and facing you... do a smooth rotation to the bottom (clockwise through 3 o'clock to 6 o'clock) and then go straight up to the top as in any isoflip, and then without taking your hand off the hoop repeat the move, but going in the opposite direction (will be the only really possible or easy direction).

The hoop flashes pinkish/white and goes dim yellow. Its now ready for the tap:

Hold the hoop loosely at the connector area. Best to hold it with two fingers so its quite loose, or have it standing on the ground, and then tap the hoop with the other hand near to the connector. The taps should be distinct, clear and in rhythm with each other. Start with very gentle regular taps and vary the intensity of the tap until you signal the hoop. You will need at least three taps that have the same interval (for the hoop to recognize the BPM). The interval is quite exact, so it may take several more taps to get two intervals of the exact same duration. Count to yourself and tap gently on the beat. If there is some music playing, start mentally or physically tapping the beat and then tap the hoop at least three times at that rhythm. The

display will now change at that interval. Don't worry if you have to do 10 taps or even 20, you will eventually signal the hoop.

NOTE: to get out of these settings and keep the hoop: save it to the saved quiver.
To return to the COMPOSE mode and continue composing/playing with the hoop:
Either do the CUSTOMIZE move from the hoop you just saved in the saved quiver.
Or redo the TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP
And then the TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

REVIEW

At this point would be worth re-looking at the intro videos and this one in particular, to give you feedback on what you have learned so far and what perhaps you could focus on

<http://youtu.be/-q7fRE4vnF0> simple functions of the psi-ko-hoop

and the intro videos:

<https://www.youtube.com/watch?v=K-64rzE7I4A> hello psi-ko-hoop
almost 8 minutes - to music, with some talking and with voiceover to introduce some of the functions and features of the new hoop from psihoops. The worlds first fully interactive motion controlled hoop.

<http://youtu.be/UmjbaATfBYA> merlin_at_play_with_psi-ko-hoop1
4 minutes long - to music, playing with some of the displays in the psikohoop

WHITE HOOPS

White is just another color you can select, and you can turn any of the hoops white in any quiver.

In random quiver it takes a couple steps – side flip to manual, do the hoop lock move, do the color select move (below), rotate wheel to white, reverse to select white, unlock the hoop, leave in manual or side flip to auto again.

In compose mode of course you select color in the first screen and you are only working with one hoop in compose mode quiver (though it's a chameleon and can color shift and shape shift and behavior shift into anything you tell it)

In any of the other 4 orientations just find a hoop pattern you like and:

Do this move: SELECT_COLOR = ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

You will see the rainbow color scheme and a wheel turn clockwise will go to the all white display and then through other color schemes till you reverse the wheel turn and lock that particular one color in.

Now a flip move in the quiet quiver, the kix quiver and the 9 o'clock pack will keep the color but advance you to the next pattern/hoop. The save quivers should not carry settings from one hoop to the next, as each hoop in the save quiver is supposed to be saved with your specific settings and not modified by another hoop setting. The only exception to this is the global reset move, which will wipe out your saved hoops and return to defaults.

You can upload your saved hoops to your computer, download them later or exchange these online. This is an advanced function, and details will be on the web site.

If you want to stay in the one pattern and not flip out, then do :

LOCK DISPLAY: RH ISOFLIP, HALF-BACK. AND NOTICE THE BLUE CONFIRMATION SIGNAL TO INDICATE THE HOOP IS LOCKED. DO THE SAME MOVE AGAIN TO UNLOCK.

Try this all out in the kix quiver (hoop horizontal with switch upwards as you turn the hoop on). In this quiver the first couple hoops are white so first of all front flip to an obviously colored hoop before setting the color to white or you might get confused.

After unlocking the hoop (if you have locked it), try getting the white hoops (or any other color scheme) to cycle automatically:

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP

If you want the different white hoops to change on a particular beat:

So keep the white color but change the pattern.

TAP_BPM = ISOFLIP, ISOFLIP (hand stays on hoop)

You will get a light pink color confirmation that you did the move correctly and then the hoop will go a dim yellow to indicate its waiting for your tap. You have to tap with the same interval between each tap, not too hard, and right next to the connector. If you get stuck you will have to turn the hoop off and on again.

SETTING BPM IN THE RANDOM QUIVER

You can vary the rate of change of the random selected hoops by doing front or back flips as already described in the flip section above.

You can also use the BPM move in the auto random select mode (default as you go into the random quiver). You can vary the rate of change with BPM and then also with flips, which may allow you to better tune into the exact beat of a piece of music.

If you go to the regular manual mode (side flip to red) or the random generated mode, (side flip to red, then backflip) and then do the BPM, it will not affect the rate of change of hoops because that is now on manual – but it will affect the individual hoop – in most hoops it will appear as a flash in the beat you set and/or affect the rate of sequencing, and will carry over into all the subsequent hoops as you flip. Or if you side flip back to auto and then flip to change the rate of change you can have both BPM going on – within each hoop there will be a flash or sequence at the rate you set and also each hoop is automatically advancing to the next hoop at the rate set by flips. This can give a continuity to the displays, especially if you have the random quiver set to one color or color scheme.

Results from setting BPM in the random quivers with the signal move will be a little unpredictable because they will depend on the hoop you start with.

RESET THE HOOP IN THE SAVED QUIVERS

The reset move works differently in the saved quivers. The idea of the save quiver is so you can save hoops with all the custom settings you have created for them, and you don't want to accidentally erase them. So these hoops in the saved quivers can be reset individually.

The psikohoop will remember what hoop in the saved quivers you were last playing with or accessing, so go into the hoop you want to reset to default and then do a half-off, staying in the 3 o'clock orientation.

Do the regular quiver reset move, but in this orientation you **need to time things exactly** – wait till the yellow color confirmation has come on and is right at the end of its flash and just going into the hoop display and start the jiggle/shake at that point. Continue the jiggle/shake till the red arc completes its journey fully, and the default hoop will appear for that slot in the saved quivers.

If you can't get the reset move to work for you in this quiver (it will perhaps take some practice), then you will have to do a global reset move.

Do a reset of the 1st hoop in the first quiver of the saved quivers (or if you have trouble with that, do a global reset as previously described) before proceeding here:

GET THE COLORS TO CHANGE ON THE BEAT

Same hoop....1st one in the SAVED quivers. Lets get an automatic color shift to happen on a beat.

Do this:

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN

And notice the yellow confirmation. Now each time you flip the hoop it will change color.

Practice toggling this move OFF so you can clear the hoop and return it to its default state.

To make the change automatic:

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP

And note the green confirmation signal.

Practice toggling this move OFF as well. (You will see why this could be important.)

Then do:

TAP_BPM = ISOFLIP, ISOFLIP (hand stays on hoop, these are left hand isoflips)

You can get the colors to change up to 240 times a minute (4 times a second) which is as fast as most music will get. To tap 4 times a second takes some practice but if you have a timer on your smart phone clock, or a piece of music with a very obvious and fast beat, you can practice. It may take 10 or so gently taps, right by the connector area, to get the signal recognized. Start with slower beats. Having the colors cycle too fast will lose the effect in most cases, as the hoop will appear to strobe or fade, but still may be interesting if you are hooping fast and leaving trails.

SAVING A HOOP AS YOU ARE COMPOSING

Tutorial video link: <http://youtu.be/pTIDqBMO-vM> playing in compose mode

This video gives you an overview of the compose mode used in real time, and worth looking at as a review of (some of the) compose mode functions.

If you are in compose mode, and making some different displays/hoops for a future performance or play session, its sometimes worthwhile to save the hoop from compose mode when you have made something you really like but still want to tweak a bit – because it may be hard to reverse/undo all the moves you have made and get back to the thing you really liked. Flip to the white screen and then save what you currently have (in a known slot in one of the save quivers). Then continue to work with the hoop in compose and overwrite the saved hoop

as you progress – that way you can always easily go to the saved version and bring it back into compose mode and work on it some more.

If you want to keep a particular position/folder/slot in one of the save quivers for this purpose, then when you have your final hoop save it from there to another position in the save quivers.

A fun way to use compose mode is to import a hoop from any of the other quivers, and start playing with it in the different screens of compose mode. If and when you get something you really like, flip to the white screen and then save the hoop to a known slot in the saved quivers. Continue to play with the hoop in compose mode, going from isolations to spins or isobreaks etc and your regular hooping moves to see the potential of that particular hoop, and if you create an even more interesting or useful display, save that one –either overwriting the last saved version or going to another slot in the saved quivers. You can play with changing colors or segment patterns or speeds of effects, and not worry about messing up the display, as you have a saved version you can return to at any time.

With the above descriptions of compose mode, you can create most of the hoop display types in the other 5 hooping environments, and plenty that are not there....if you make something useful and unique, think about saving it and then uploading it to your computing device for future use, or sharing it with others.

OVERVIEW OF THE DIFFERENT ORIENTATIONS

Quiet quiver....switch UP (12 o'clock) and facing you. Flashes turquoise.

Starts with a gradient hoop in the red/orange/yellow family, which responds to angles with color changes. (When we say “starts with” we mean the default setting before you have been playing with the hoop or after you do a reset move).

.....Mellow hoops. Some respond to angles, some respond to movement. ARC control with 3 side flips. 2 training hoops. Try toggle color flip, or select color or toggle auto-cycle. Try importing some of these into compose mode if you want to spice them up.

Saved quiver/3 pack quiver...switch to the right/3 o'clock and facing you. Flashes yellow.

Starts with 2 short orange segments that sequence around the hoop.

Access the 3 different quivers with side flips. Each of 9 total hoops in the saved quivers can have its own settings independent of the others in the quiver. Each hoop is reset individually. You can change settings of a saved hoop. You can import a saved hoop into compose mode and change it and save it again. You can save from one slot in saved quivers to another. You should be able to upload your saved hoops to your computer (early 2015)

9 PACK quiver....switch on the left (9 o'clock) and facing you. Flashes pink.

This has 11 quivers now. Starts with a blue/white/red flashing display that says "PSI" when you wave the hoop around. The first quiver has 16 hoops of different images or symbols. The 16th is actually a custom spot where you can create your own logo etc. You navigate from one quiver to the next with side flips, like you do in the saved quivers. If you get familiar with the first hoop in each quiver that will help you get oriented. A list of the different quivers and description of their hoops

is in an appendix on the web site. [\(LINK THIS\)](#)

KIX (Quixotic) quiver....switch UP with hoop horizontal. Flashes purple.

Starts with a segmented white/dark hoop. There are around 22 hoops in this quiver. The last half of them are "complex" movement hoops, where the hoop changes displays based on whether its being hooped with around the core or doing isolations or varying the speed of movement .

Random quiver....switch DOWN and hoop horizontal. Flashes blue.

Hoops are autocycling, meaning that new random hoops appear at certain intervals. These hoops are selected from all the quivers of the psikohoop, and some of them will have displays that vary automatically themselves, and some with be movement sensitive. The default speed of change is around 5 seconds.

....Front flips change hoops but also increase the speed of autocycle with each flip, and with around 9 flips you will be at the max speed which is just under a second for each hoop. Back flips slow down the rate of change to around 20 seconds maximum.

.....A side flip in either direction (doesn't matter if the switch is at 9 or 3 or facing you or away) stops the autocycle and puts you into manual mode...so if you are quick you can grab a hoop out of this slippery quiver. Another side flip puts you back in autocycle.

.....In manual mode (one side flip from the default autocycling) if you do a back-flip you go into a manual "random generated mode" which is a bit different from the "random selected" mode of the start of random quiver. In "random generated" the psikohoop generates hoops in real time and this quiver is very deep! Hopefully you will see hoops you have never seen before. These hoops don't autocycle so if you find one you want to play with, make sure not to do a flip move, or instead do a LOCK move or save the hoop to the saved quivers.

Compose mode quiver....switch at bottom (6 o'clock) and facing you. Flashes red.

This mode starts with a rainbow hoop, and you can vary any of its qualities (color, segment pattern, LED affects etc) by flipping to different virtual "screens" and doing wheel turns. You can bring any of the other hoops in your psikohoop into compose mode to vary the displays further, and then save from compose mode. And you can do all this in real time, without any buttons, as you are hooping or performing.

OVERVIEW of INTERMEDIATE LEVEL

If you are having trouble with any of this, go back to something simpler. Just the flip move in any of the top five hooping environments, can be used to turn the psi-ko-hoop into an amazing interactive instrument. Work with the controls and functions that seem easiest to you and fit your style, and be patient about absorbing more.

The tutorials and videos are intended to be reviewed several times. As this is all new to planet earth we need to generate a lot more experience with this type of interface before it will become as easy and natural as a regular computer or screen interface. We are re-inventing the wheel here.

Play with each thing you learn till its second nature and you can be expressive and creative with it. Check out some videos or work with others. See if you can make your hoops play in harmony and unison with other psi-ko-hoops or synth hoops.

Don't get fixated on cool displays....especially trying to impress others with them – others might find them overwhelming, distracting, annoying or boring – stay more with the hoop as an expressive instrument and dance partner and you will have a better time with it.

Example video of simple displays . (note Merlin is a hoop maker and not a performer. This video just shows some very slow style of hoop dance, using a display that changes color with angles – just to remind you to come back to your own style of hoop dance and expression and use the psi-ko-hoop for that purpose) <http://youtu.be/N-DjvGeiW7A>

The interactive controls have been made to align with the physics and behavior of an unsecured wheel turning 8ujhin space – specifically a hoop- and the challenge is to discover how best to work with each display or set of controls in order to express more with your hoop dance; and of course to have the most fun doing so...

Once you get familiar with the above intermediate level controls, and have played with the hoop for a few dozen hours or more, (maybe a few hundred hours?) you may want to explore the full tutorial. But the above should allow you to gain some mastery of the psi-ko-hoop as an instrument for expression, learning, dance, play and performance.

If you find yourself getting too involved with the mechanics and tech of the hoop, just get up and hoop with this thing!

CRIB SHEET.

CHANGE DISPLAYS - FLIP MOVE... SWITCH AT TOP AND FACING YOU. SLOW AND STEADY MOVEMENT.

ACCESS DIFFERENT HOOPING ENVIRONMENTS – TURN THE HOOP ON IN ANY OF 6 ORIENTATIONS.

GREEN SIGNAL – GET YOUR HAND OFF THE SWITCH BEFORE THE HOOP TURNS OFF. (Or notice how much charge there is left in the hoop, and what the brightness is set totg)

NAVIGATE -SIDE FLIP – 3 SIDE FLIPS NAVIGATES BETWEEN QUIVERS (in 9 pack and 3 pack).

ARC CONTROL in top quiver (hoop upright with switch at top) = SIDE FLIPS

Lock display: RH ISOFLIP, HALF-BACK. UNLOCK display: Do the same move: RH ISOFLIP, HALF-BACK

SAVE: ISOFLIP, HALF-BACK. Then wheel moves red dot to slot you want, reverse wheel to select.

TOGGLE_COLOR_FLIP = RH ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN. THEN FLIPS TO CHANGE

TOGGLE_AUTO_CYCLE = RH ISOFLIP, RH ISOFLIP

TAP_BPM = ISOFLIP, ISOFLIP (left hand does the isolation and stays on the hoop)

Brightness control = RH isoflip, continue onto RH clockwise isolation all the way around

SELECT_COLOR = ISOFLAP 180 HORIZONTAL, DROP HOOP DOWN. THEN WHEEL TO SELECT.

CUSTOMIZE (import hoop to compose mode): RH isoflip, turn hoop clockwise $\frac{1}{4}$ turn so your hand and the connector are now at 3 o'clock, side flip forward once or twice.

QUIVER RESET – resets that quiver if shake after turning hoop on in that orientation. red light has to go all way around

Global reset. In compose mode orientation - $\frac{1}{4}$ turn isolation cw from 6 to 9 o'clock and back, then repeat $\frac{1}{4}$ turn isolation cw from 6 to 9 and back

COMPOSE MODE (switch facing you at bottom, hoop upright).

- WHEEL TO SELECT
- FLIP TO CHANGE SCREENS
- HOLD AT 3 O'CLOCK = LOCK
- THEN HOLD AT 3 O'CLOCK -= UNLOCK

THE SCREENS IN COMPOSE MODE

- 1st screen....red...color select.....side flip =gradients
- 2nd screen...yellow...segment select.....side flip = more segment selections
- 3rd screen....green....LED effects..... side flip = second virtual circuit effects
- 4th screen....aqua...sequence segments....side flip = # sequence segments
- 5th screen....blue...effect speed.....side flip = strobe timing2 side flips = super-strobe
- 6th screen....purple...arc positions.....side flip = add more effects
- 7th screen...pink...movement responses...side flip= gives a second side display
- 8th screen...white.....no effects (with wheel turns). Signal moves work (like save, lock, toggle).

SIGNAL MOVE DOESN'T WORK?

- SLOW DOWN AND GET IT SMOOTH. NO BUMPS OR JERKS.... NO PAUSES
- START WITH SWITCH AT TOP AND FACING YOU
- ON SIDE FLIP START WITH SWITCH TO LEFT SIDE (9 O'CLOCK) AND FACING YOU
- IS HOOP ALREADY LOCKED?.... red flash....UNLOCK IT FIRST

random mode: opens in random selected (selected from all the quivers in the psikohoop)
front flips increase rate of automatic hoop selection (from around 5 seconds to less than one)
Back flips slow down rate (to around 20 seconds)
side flip puts on manual (red confirmation) front flip now selects new hoops. Backflip goes into "infinite" random generated mode. Side flip again to go back to auto (green confirmation)

Quiet quiver....switch UP (12 o'clock) and facing you. Flashes turquoise.
Saved quiver/3 pack quiver...switch to the right/3 o'clock and facing you. Flashes yellow.
9 PACK quiver....switch on the left (9 o'clock) and facing you. Flashes pink.
KIX (Quixotic) quiver....switch UP with hoop horizontal. Flashes purple.
Random quiver....switch DOWN and hoop horizontal. Flashes blue.
Compose quiver.....switch at bottom (6 o'clock) and facing you. Flashes red.

Video links to tutorial videos:

(no doubt more will be added by us by the time you get this, and also by others – please add your own videos if you feel you can make something clearer or more useful, or to add to the repertoire of possibilities. Of great interest would be videos that showed some simple and effective uses of the psi-ko-hoop as an interactive instrument.)

http://youtu.be/PvWLXX-Xk_4 this is the introductory video that goes with the previous tutorial document. But good to review this as necessary.

http://youtu.be/rZqhtYnIP_w THESE ARE THE VIDEOS THAT GO WITH THIS INTERMEDIATE TUTORIAL

<http://youtu.be/5aRkNH1yIcA>

<http://youtu.be/gMmuj2zVoT0>

<http://youtu.be/2QiGR1cTL0U>

<http://youtu.be/YVCvQf3F7bI>

http://youtu.be/fu0TtcwL_uc

<http://youtu.be/X6eLIGKd0hY>

<http://youtu.be/5LPzmAMMMhI>

<http://youtu.be/QTRBdV-j7dQ>

<http://youtu.be/7SA9EFHrIZE>

http://youtu.be/-LaO1wGb_uk

<http://youtu.be/wakSkfsN7N4>

<http://youtu.be/9zoFd9wduCU>

<http://youtu.be/oWDbqKdocTA>

<http://youtu.be/BQW6PNGzZpo>

<http://youtu.be/B44o9A8ypEQ>

<http://youtu.be/aGfKRvFy9BI>