# Endtopia – Jack E. McCoy

**Effect:** The jokers are removed and the 52 cards are shuffled. A card is selected and lost inside a deck. The deck is reverse-faroed and the magician eliminates either all the out-jogged or in-jogged cards. This is repeated over and over until one card remains, the selection.

**Method:** You must know where the card is from the top (how many down). Once you know it's numbered position, calculate the binary equivalent of that number. Now, as you do the reverse faros, use the binary sorting key map on the next page to <u>eliminate</u> either the out-jogged cards or in-jogged cards, according to the binary values. Here's the key: Each time, do an 'in' faro (the 2nd, 4th, 6th, 8th, etc. cards out-jogged).

| in | out | |
|---|---|---|
| 2 | 1 | 1st r-faro |
| 2 | 0 | 2nd r-faro |
| 4 | 0 | 3rd r-faro |
| 8 | 0 | 4th r-faro |
| 16 | 0 | 5th r-faro |
| 32 | 0 | 6th r-faro |

Example: Suppose the selection is 15 cards down. The binary equivalent of 15 is 1 + 2 + 4 + 8 + 0 + 0, so during the 6 reverse-faro's you would <u>eliminate</u> the out, in, in, in, out, out, (jogged) cards, in that order, during the 6 processes. The 1st couple of reverse-faros take some time, but the deck whittles down quickly and soon things move fast.

Alternately, on the times the 'in' cards are to be eliminated, simply do the initial reverse-faro by out-jog the 1st, 3rd, 5th, etc. instead of the 2nd, 4th, 6th, etc. That way the eliminated cards will always be the portion you out-jogged and will look consistent with each other. Just think, *"If 'in', out-jog the top card and every-other card after it. If 'out', out-jog the 2nd card and every-other card after it."*

Here's a very fair-seeming cut sequence I came up with, for this trick, that allows you to not only know how far down the selection is in the deck but keeps it in the upper portion so calculating the binary value is simpler.

1. Remove the 2 jokers and drop them onto the table, face up. Have a card selected, returned and secretly control it to the top by your favorite means.

2. Start dealing the cards off the top of the deck into a pile, silently counting them as you do. Tell a spectator to say “Stop”. When they say it, remember how many cards were dealt. That memorized number is how far down the selection will be in a moment, but not yet. Ask the spectator to pick up one of the jokers and drop it face up onto the dealt pile on the table. Continue dealing cards on top of that joker and ask them to say “Stop” once more. When they do, stop the dealing and tell them to place the other joker face up at that spot. Deal some more, then to save time act bored and drop the remainder on top. Pick up the reassembled deck.

3. Spread to the first face up joker and cut all the cards above it to the bottom. Remind the spectator of their free choice of this location. Remove the joker and set it aside. Spread to the other joker, once again cutting all the cards above it to the bottom. Likewise mention the spectator chose this place for cutting as well. Remove the joker and set it aside.

The fairness is that all is above board, the spectator did truly choose two random places for the deck to be straight cut, what’s not realized is the portion on top is the first dealt group and the selection is down inside the deck equal to your memorized number. This also usually keeps the selection in a higher part of the deck, it doesn’t have to but most of the time your binary calculations will be easier. But once again, the selection can end up anywhere, so if the spectator is taking his time saying the first “Stop”, let him, just scold him mentally and explain to him that some of the deck is needed for the 2$^{nd}$ joker.