

On ultimate; throw and receiving a dump

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Defence wins games; offence loses them. This is because, by the end of the game, the team that has more turnovers will have scored fewer goals¹. Hence, to win more games your ultimate team might seek to increase the number of turnovers you get per times they score (i.e. more effective defence), or decrease the number of turnovers you make per goal scored (i.e. have a more effective offence)².

This document is a two-pager about maintaining possession on offence by throwing or receiving a dump pass³. It first discusses what a dump is and why it is important. Then positioning for the dump is discussed, followed by how to engage and complete a dump. Finally, the using dumps to generate offensive opportunities is discussed.

What is a dump and why is it important?

What is a dump⁴? It can mean a lot of things, but usually it refers to 'dumping it' back to one of the handlers so as to reset the stall count and retain possession of the disc. In short, it is a high-percentage pass, made to reset the stall count and so retain possession⁵. It is important because it impacts, and to an extent dictates, whether your team can play low-risk, high-completion offense. With an effective dump-set your team can retain possession and wait for good opportunities. Without a reliable dump-set, you'll likely have to play higher-risk offence⁶. Unfortunately, it's time for...

...some probability

The probability of scoring is a function of the number of passes made and the completion rate of each of those passes⁷. Different players on your team will have different completion rates, and these too will be impacted by whether they are taking high- or low-risk options, so it all gets a bit complicated. But, working through some hypotheticals: let's say your team has completion rates for cutters (O1-4) and handlers (O5-7) as shown in Table 1.

If a handler has the disc one option might be to attempt a huck for a goal (40% chance of success). Alternatively, a (non-huck) regular throw to a cutter might advance the disc, (80% completion). However, if this does not score, the cutter will then have to throw another forward pass (40% completion rate = 32% overall), or a dump (60% completion rate = 48% overall). Every pass increases the overall

¹ Although there are some edge cases, such as if there is a very strong upwind-downwind and the flip at the start decides the game. But, in general, if your team turns the disc over you will only get it back when your opponents score (and then pull it back to you) or if they, themselves, also turn it over.

² Porque no los dos?

³ This is part of a series, available at <https://github.com/James-Reynolds/Ultimate-strategy-and-tactics>.

⁴ A backwards pass? Sometimes. A short pass? Often. A pass back to a handler? Usually.

⁵ There are three ways for a turnover to occur: 1) the stall count reaches 10; 2) a pass is incomplete; or 3) a pass is intercepted. Throwing a dump deals with all three as: it gets the stall count back to zero; dumps are generally easier throws to make; and there is not much that a defender can do about a well thrown dump, as they are difficult to intercept.

⁶ Huck-and-zone anyone? Not that there is anything wrong with huck-and-zone if it is working. Just that it will not work against teams that don't turn the disc over much.

⁷ For example, you might catch the pull and then immediately throw it deep to the endzone. Maybe there is a 40% chance of someone on your team catching it for a goal. Alternatively, your team might move the disc downfield through a series of lower-risk throws. However, if it takes your team 5 throws, each with a completion rate of 85%, to score your overall chance of scoring is only 44%, as

$$0.85^5 = 0.44 \quad (1)$$

Table 1: Completion rates 1

Players	Completion rate		
	Huck	Regular	Dump
O1, O2, O3, O4	-	50%	60%
O5, O6, O7	40%	80%	90%

risk of a turn, and the original 40% chance of a huck succeeding is already starting to look pretty good⁸

Now, compare to the situation shown in Table 2, with the cutters (O1-4) having a 80% completion rate for a dump. That 40% huck isn't looking very good any more, given that a handler-cutter (80%) and cutter-dump (80%) is overall 64% Table 2, therefore, suggests that, with the higher dump completion rate amongst the cutters, the handlers can be a bit more conservative when hucking⁹.

Positioning

Engaging and completing

Gaining an advantage from dumping

⁸ Essentially, if the dump completion rate is low the handler might as well have a shot for a goal given that if they take a lower risk option it's about the same overall chance of turning over anyway.

Table 2: Completion rates 2

Players	Completion rate		
	Huck	Regular	Dump
O1, O2, O3, O4	-	50%	80%
O5, O6, O7	60%	80%	90%

⁹ The handler huck percentage is shown as having increased to 60%, suggesting that the handlers will be looking off the riskier hucks. The point, in effect, being that if you (as a cutter) can improve your dumping it has flow-on benefits for throws by others and the team as a whole.

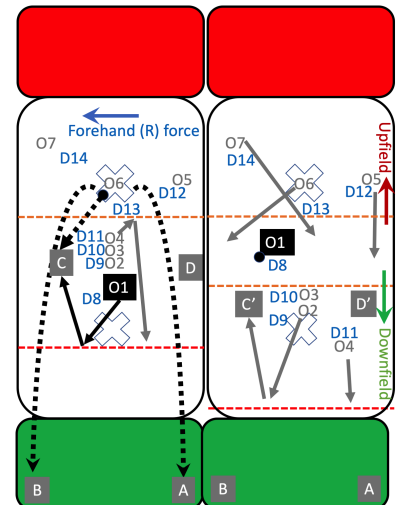


Figure 1: Vertical stack: starting position (left), and development (right)