

A VESTPOCKET GUIDE TO FRISBEE SELECTION

or.....

A HISTORY OF PRO MODEL PRODUCTION

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## A Guide To Frisbee Selection

Some people get very interested in the frisbee itself, in the belief that a given frisbee will help them to throw better. This belief is largely erroneous. As long as a frisbee is stable it is satisfactory. Stability is the number one criterion of frisbee quality; most frisbees made by small, one shot companies which try to copy the designs of others are unstable and therefore worthless. These frisbees are known in the trade as "knock offs." To determine if a frisbee is stable throw a flat shot. If it starts out flat and then turns to the right (with normal spin) or to the left (with counter spin) it is unstable and belongs in a trash can. This motion of curving undesirably to the left or right is called turning over. If you prefer to walk into a store and get a stable frisbee on the first try I suggest you purchase a Wham-O product. Since 1967 the standard disc for the serious player has been Wham-O's Professional Sport Model. This frisbee has been manufactured in six different colors and a special glow in the dark model known as the Moonlighter. It has also been made in six different molds. Unless you want to be a fanatic you can stop right here. You now know all you need to get a stable frisbee.

O.K. fanatics read on. The above mentioned Wham-O frisbees vary in the following ways: color, mold number, weight and flexibility. There are also some other, less important variables. The first thing people usually learn about is the mold numbers. Perhaps you have overheard players saying "I won't play with anything but a

14" or "10's are no good." These individuals were talking about mold numbers. Look at the underside of a Pro frisbee; there in the middle you will see the mold number. The six possible numbers are 1, 4, 10, 14, 15, and 16. But molds are not constant; each of the above molds have been retooled at least three times and each tooling is slightly different. Even so the molds have sustained certain individual characteristics throughout their lives. Below I have listed the molds and some of their distinguishing properties.

#1. This is the first and mellowest of the molds. It was made by retooling the original Pluto Platter mold (Wham-O's first frisbee). Its proportions and flight characteristics are aesthetically pleasing. It is a good accuracy mold and ideal for golf. For distance competition it performs well but has been bested. The first toolings and runs of this mold were the best; they were stiff and dense, excellent for any purpose except jamming or playing M.T.A. in a light wind. In 1969 the mold was retooled and a gyre (imbalance) was introduced. Frisbees from this period were also a little softer and lighter but still better than anything presently available. These later 1's are "wrong way 1's" in that the flag on the numeral one points in the wrong direction. No 1's were made in the United States after 1969. Since then the mold has been used by foreign licensees but it now has an extreme gyre.

#4. This mold is a curiosity. It is unquestionably the rarest of the molds and incidentally the worst. To my knowledge 4's have been produced in only one color - white. It is the lightest of the molds and of interest only as a collectors item. It has been in disuse or disguise since 1969.

#10. The ten is probably the second oldest mold. It is relatively light but very stable. These characteristics make it a good jam frisbee and also good for playing M.T.A. in a light wind. At the

end of 1970 it was retooled to make a "new" frisbee, the All American. This is nothing but a redecorated Pro. It is fairly light (usually well below the 115 grams printed on the package) and is good for playing M.T.A. in a mild wind. All Americans are usually a little sluggish in skipping. Pre-All American 10's are good skipping frisbees, however.

#14. The 14 is considered by all players to be a good mold, some think the best. To my knowledge, colored 14's were never produced. The white 14's of 1968 and 1969 are excellent frisbees and the Moonlighter 14 of 1968 is the heaviest Pro ever made - approximately 129 grams. For players with the requisite strength they are ideal for distance competition and frightfully deadly in guts. These older 14's are known as split digit 14's because they have a large 1 to the left of the center and a large 4 to the right. Sometime in 1970 a new 14 was made. It's numerals are smaller and together at a point below the center. We call these new ones small numeral 14's. The Moonlighter and fire-orange 14's of 1971 are an example. This new mold is slightly unstable; fire-orange frisbees made from it turn over at about 55 yards. At last check white split digit 14's were still available from the Canadian licensee - L'il Beaver of Toronto. They do have a very minor gyre.

#15. The 15 is an up and down mold in that some very fine and some very poor frisbees have been formed in its cavity. It has the lowest profile of all and is therefore the fastest flying. The disadvantage of this is that it makes the mold the least stable. After a few hours of play on concrete or asphalt a 15 will begin to turn over. Indeed, some 15's have been known to turn over right out of the package! In 1968 and early 1969 especially stiff and heavy 15's were produced. They have been nicknamed "brick bats." They turn over very slightly at

about 70 yards. Later in 1969 colored 15's were made which are stable throughout their flight. The 15's of 1970 and '71 are unstable with some turning over as early as 30 yards. Perhaps the best distance frisbee to date was the Moonlighter 15 of 1969.

Wham-0 has unintentionally made matters easy for those wishing to identify 15's while they are still in the wrapper at the store.

The raised letters which read "Wham-0 Frisbee Official Pro Model" are smaller on the 15 than on any other current production mold.

They are the same height as those of the early Pros, approximately 11/32". Letters on newer molds are roughly 13/32" high.

#16. The 16 is the newest mold and in its short life has gone through a number of changes. The first 16's appeared in the spring of 1970. These were high-profile, split digit models. They hold a curve very well and travel slowly because of their high wind resistance. Hence they are not well suited for distance as throwing them very far is hard work. They do make fairly good M.T.A. frisbees, however. Their plastic has an excellent feel. In the latter part of 1970 the mold was retooled; it now boasts a lower profile and small numerals but is a bit on the light side with weights ranging from 99 to 112 grams. The split digit 16's were only made in white and the newer ones in fire-orange and Moonlighter. All 16's are quite stable.

The next most important variable is the plastic from which the discs are molded. This determines their density and flexibility. The early Pros were made from a plastic technically designated as "low melt." This was a dense, stiff material which made for good throwing frisbees. Unfortunately, it had the un-

desirable side effect of being brittle such that frisbees made from it were crack prone. Consumers complained and the manufacturer responded with a lighter, more flexible material which, for lack of a better name, I shall call middle period plastic. This change took place approximately in the beginning of 1969. Middle period plastic is readily identifiable by its shiny, lacquer-like finish. It is denser and stiffer than that which is currently in use. Frisbees made from it are the best jam and freestyle discs ever produced. Middle period plastic was only used for about one year. Starting in 1970 Wham-O plastic changes came to thick and fast to record. Post 1970 production tends to be lighter and more flexible but there are numerous exceptions. It must be remembered that the three types of plastic listed above are not clear, distinct entities but rather families of plastics as no two runs are identical just as no two toolings are. Numerous small changes were made of which no one has record.

Pros can be further identified by their color and label. The chart below will help you to check mold number against color and vice versa. The first Pros were available only in white. In the latter part of 1968 the four colors were selected that were to be the standard for more than a year. These were maroon, turquoise, purple and chartreuse. White was continued, Moonlighter also appeared around the end of '68 or beginning of '69. Their color is a kind of lemonade yellow. In the beginning of 1970 the four colors were phased out on the grounds that stores complained it was a strain to maintain a stock of all four, even though they sold fairly evenly.

MOLD #	WHITE	MAROON	SI-CORCT	PURPLE	BLACK-IRIDIC	MOON-LIGHT	FIRE	ORANGE
# 1	X	X	X	X	X			X*
# 4	X							
#10	X	X	X	X	X	X		X
s.d. #14	X					X		X*
s.n. #14						X		X
#15	X	X	X	X	X	X		X
s.d. #16	X							
s.n. #16						X		X

PRO  
MODEL  
PRODUCTION  
CHART

\* - SPECIAL TOURNAMENT RUN  
 S.d. - SPLIT DIGIT  
 S.N. - SMALL NUMERAL

White was continued and a new color, fire-orange, was introduced. Fire-orange had been used since 1968 for special, small quantity tournament runs. It is easily read and excellent for golf. Then, in early 1971 white was phased out leaving fire-orange the sole Pro color. In the beginning of 1971 the "All American" made its appearance. Later that year another new Wham-O disc came out - the "Fastback." This frisbee incorporates what may turn out to be the most important innovation to date in frisbee design. This is a groove running around the frisbee just inside the rim. On the underside there is a corresponding bump. The objective is to have the high speed of a low profile frisbee while avoiding instability. Due to technical production difficulties the promise of the Fastback has yet to be fulfilled. Present models turn over at about 25 yards and weigh only about 93 grams despite being the same size as the Pro. Prototypes made from All Americans work strikingly well and hopefully these results will be duplicated in the near future in production models. The Fastback comes in yellow only and its mold number (FB1 or FB2) is hidden under the label.

Labels are a relatively simple matter. In 1967 and '68 they had a pattern of five interlocking rings. Frisbees with this label, regardless of color or mold are known as olympic ring frisbees. They state that they weigh 108 grams although they vary from 103 to 122. A few colored Pros were run off prior to the label being changed. This second label has no rings but retains the statement of weight. Also about this time the Moonlighter was introduced. The first Moonlighter labels are similar to those of the Pro with the noteworthy exception that the statement of weight reads 120 grams. Some early experimental Moonlighters, the so-called "15%ers"

actually weighed as much as 135 grams. Others weighed as little as 110 grams. Starting in 1970 the statement of weight was deleted on Pros but retained on Moonlighters. <sup>ON MOONLIGHTERS THE STATEMENT DISAPPEARED A FEW MONTHS LATER,</sup> Consumer complaints were once again responsible for a change. The frisbees' actual weight was often well above or below that which was stated on the label and consumers felt cheated in some way, occasionally returning a frisbee to the manufacturer for replacement. Rather than improve quality control to solve the difficulty the manufacturer simply elected to eliminate the statement of weight. Weights can vary 10% or more within the same run. Incidentally, the Canadian Pros still are made with the old olympic label at the date of this writing.

The final matter of interest in the makeup of a Pro is the contrasting colored ring(s) it wears on its upper surface. This is known as the hot stamp or hot ring. The early (white only) Pros of 1967 and 1968 had a single black ring. The experimental colored Pros are identifiable not only by their olympic labels but also by their black hot stamps; all colored Pros made for resale had gold hot stamps. When the Moonlighter was introduced it also received a gold hotstamp, the black one being retained for white models. During this period the experimental and tournament runs of fire-orange Pros were made. They also had the black stamp. With the disappearance of the colors in 1970 went their gold hot stamps. Moonlighters became the only gold stamped Pros. Starting in 1971 the single wide ring was abandoned in favor of two narrower ones. Hence for 1971 we have fire-orange Pros with a double black hot stamp and Moonlighters with a double gold stamp. The All American has its own Fourth of July style hotstamp in blue and red. Fastbacks sport a single, narrow black ring. Canadian Pros are easy to spot by their exceptionally crude

single black ring. It has a rough, uneven surface.

An interesting sidelight to the story of the hotstamps is the boon they have proven to be for tournament directors, players and disadvantaged children. Because the hot stamp process is less than 100% perfect it provides quite a mountain of what are colloquially known as hot stamp rejects. (the p. r. men call them seconds). These bonus platters are saved up and then sent out to orphanages and frisbee tournaments. Their rings all have missed spots. For a short time in 1969 and 1970 Wham-O made use of a peanut sized label which read "Balance inspected by #62." If you carefully peel back one of these you will find that the frisbee is actually a hot ring reject.

By now you are probably wondering "Why hasn't he mentioned the Master?" Well, here it comes. The Master Tournament Model is larger (10 7/8" as opposed to 9 3/8" for the Pro) and heavier (nominally 150 grams) than the Pro. It was brought out along with the Pro, Mini and revamped Regular in 1967. The Master sees relatively little use in serious play for several reasons. First and foremost because its size and weight make it difficult to throw quickly and easily. Its low flying speed also slows down a game. A further disadvantage is the high price - nearly twice the cost of a Pro.

The first Masters were available in black only. They had a double hot stamp of gold and white. Masters have never had mold numbers although there are several tools. These early Masters had two labels, and upperside one with the name and weight of the frisbee and an underside one with a serial number. In 1970 this second label was eliminated and the serial number included on the upperside label. Also in 1970 the white Master was introduced. This is an attractive frisbee with black and gold hot stamps. Fortunately, a good number were made before the label change. The history of Master plastic closely parallels that of

the Pro. with the early ones being stiff and heavy, similar in performance to Odd-Job's hat. Later Masters were made of middle period plastic. These are my personal preference because of their combining weight with a modicum of flexibility. Later in 1970 Masters grew softer to the point of flimsiness. Using these can be likened to throwing a wet beret. Determination of this flimsiness is easily done. Hold the frisbee right side up in both hands with the fingers underneath and the thumbs on top. Now with the thumbs one third of the way between the edge and the center press down. If an audible pop is heard the frisbee is of the wet beret variety. This method can be used on any frisbee, however knock-offs tend to be too stiff rather than too soft so the test is of greatest value on Wham-O products. All Masters are very stable and it takes many hours of playing on a hard surface to render them otherwise. Players who desire the stiff Masters of yesteryear are referred to L'il Beaver.

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Shortly after completing the above I learned of a new frisbee which deserves serious attention. It is called the C.P.I. All Star Saucer Tosser and is larger (by 1/8"), lower (by 1/16"), and heavier (by about 10 grams) than current production Pros. Stable throughout its flight, it can be thrown faster and farther than the Pro.

It is also stiffer and has an unspoiled upper surface. The All Star is good for a hard, fast game or throwing distance. They are a bit heavy, <sup>stiff</sup> for tricks or guts. They have no mold numbers although it would appear that there are two tools; one which produces light warped discs and another which yields heavy, true ones. Their lip is slightly deeper than that of a pro.